

CONTENTS **New Products Hub Bearings & Seals** 3-5 145-146 **Air Cleaners & Accessories Rear Ends & Axles** 6-9 147-157 Safety/Driver Equipment **Body** 10-21 **158-163 Sprint Car Components** Brake 22-35 164-178 **Bumpers & Noses** Steering 36-40 179-187 Suspension Chassis 41-57 188-219 Chemicals 58-61 **Tools & Pit Equipment** 220-251 Cooling 62-72 **Transmission Components** 252-255 **Electrical, Gauges & Ignition** 256-263 **Wheel & Tire Accessories** 73-88 **Engine** 89-103 **Apparel & Display Material** 264-266 **Fasteners** 104-121 **Numerical Index** 267-289 Fittings & Hoses 122-135 **Product Index** 290-296 **Fuel System Components Terms & Conditions** 136-144 297

ALLSTAR Employee R&D Team





Nick Burch



Tom Rutherford



Rich Farnsworth



Duane Rantz



Ryan Disterheft



Jason Koehler

We are hard-core performance enthusiasts. We not only stand behind our products, we use them!

ALLSTAR' PERFORMANCE

14" Flat Base Air Cleaner Kits

ALL25950 Plain Air Cleaner Kit ALL25951 Black Air Cleaner Kit Page 7



Scale Buddy ALL13115

Page 57



Air Cleaner Gasket ALL87207

Page 7



Air Filter Sealing Foam

ALL26106

Page 7



GM LS Coolant Passage Plugs ALL31170

Page 68



Black Rear T-Bar Breakaway

ALL23256

Page 20



Billet Aluminum Hose Clamps

Battery Cables

ALL18326 Clamp for 1-1/2" ID Hose **ALL18327**..... Clamp for 1-3/4" ID Hose Page 71

ALL76341-10 - ALL76341-40



Black Brake Bias Adjusters w/

Pointer Reference



ALL42073 Adjuster w/ Knob ALL42077 Adjuster w/ Crank Handle

Page 29



Page 78

Page 78



Honda Civic Mini-Stock Roll Cage Kit

ALL22096

Page 41



Solder Slugs for 6 Gauge Terminals ALL76133

Page 79



Clamp-On 10lb Ballast for Small Tube Chassis

ALL14205

Page 57



Battery Disconnect Switch w/ Removable Key

ALL80152 Switch w/ Decal ALL80153 Switch w/ Panel

Page 80





Cover for ALL80530 **Bert/Brinn Starter**

ALL26236

Page 81



Fastener ALL18234

Page 223



Remote Oil Filter Mount Kit

ALL92027

Page 90



Safety Wire .041 Diameter ALL11008

Page 224



GM LS Oil Galley Plugs

ALL90067 OE Style Nylon ALL90068..... Billet Aluminum

Page 91

Black Quick Turn Fasteners

Page 108-109



Page 92





ALL18628 Clear 10pk ALL18628-50 Clear 50pk **ALL18629** Black 10pk **ALL18629-50**..... Black 50pk

Page 113



Rod Ends

ALL58078 Pro Rod End RH Moly PTFE Lined 1/2" ALL58083 Pro Rod End LH Moly PTFE Lined 1/2"

T-Bolt Band Clamps ALL18344 - ALL18355

Page 121



Mini Stretch Wrap w/ Handle

ALL14230 Mini Stretch Wrap with Handle

ALL14232 Replacement Roll 3"

x 1000'

Page 99, 232

SBC Performance Mechanical Fuel Pump w/10AN Fittings ALL40267

Page 136



Universal Dragster Front Motor

Plates

ALL38142 SBC ALL38143 BBC

Page 101

Allstar Graphic T-Shirt

ALL99903

Page 264



Bead Breakers

ALL44026..... 10" ALL44027 13"

Page 178, 245, 261





2-Piece Fuel Filter Brackets

ALL 40190	1-1/8"
ALL 40191	1-1/4"
ALL 40192	1-1/2"
ALL 40193	1-3/4"





Control Arms for Metric Chassis w/K6024 Ball Joint

ALL57980	RH, 8"
ALL57982	LH, 8-1/2"
ALL57984	LH, 9"
	LH, 9-1/2"
ALL57986	
Page 192	, -



Fuel Line Check Valve ALL40208

Page 137



Digital Bump Stop Gap Tool ALL96412

Page 200



Page 157



Black Helmet Blower System ALL13022

Page 161



Mini Panhard Bar Clevis

ALL60232 1-1/8" I.D. **ALL60233** 1-1/4" I.D.

Page 205



Take-Apart Low Friction Ball Joints

Page 191



ALL60178

Page 207



Spindle Slug Removal Tool

ALL11182

Page 187, 223, 248



Page 210



ALL56117

Page 196, 219



Center Pull Birdcage

ALL60410

Page 216



Universal Three Fastener Plastic Wheel Covers w/ No Hardware

ALL44280 - ALL44288



Page 256



Page 253





Lightweight 14" Aluminum Air Cleaner Kits

Race and dyno proven air cleaners feature a low profile and free flowing design that creates more power over standard flat air cleaner assemblies. Kits include a high flowing dropped base with matching lid and a sure seal spacer with an integrated O-ring for a positive seal on carburetors with a 5-1/8" neck.

Kits Without Element

These kits are sold without filters. Select plain or black coated finish and the correct height sure seal spacer.

Description	Plain Finish	Black Finish
Kit With 1/2" Sure Seal Spacer	ALL25900	ALL25901
Kit With 1" Sure Seal Spacer	ALL25902	ALL25903
Kit With 1-1/2" Sure Seal Spacer	ALL25904	ALL25905
Kit With 2" Sure Seal Spacer	ALL25906	ALL25907

Kits With Paper Element

Kits include a paper element filter in choice of 3", 3-1/2", 4" or 5" height and a 1" sure seal spacer. Choose from plain or black coated finish lid and base.

Description	Plain Finish	Black Finish
Kit With 3" Paper Element	ALL25910	ALL25911
Kit With 3-1/2" Paper Element	ALL25912	ALL25913
Kit With 4" Paper Element	ALL25914	ALL25915
Kit With 5" Paper Element	ALL25916	ALL25917

Kits With Washable Element

Kits include a pre-

oiled washable element filter in choice of 3", 4", 5" or 6" height and a 1" sure seal spacer. Choose from plain or black coated finish lid and base.

Description	Plain Finish	Black Finish
Kit With 3" Washable Element	ALL25920	ALL25921
Kit With 4" Washable Element	ALL25922	ALL25923
Kit With 5" Washable Element	ALL25924	ALL25925
Kit With 6" Washable Element	ALL25926	ALL25927

Individual Components

ALL25940...... 14" Top Plain ALL25941...... 14" Bottom Plain ALL25942...... 14" Top Black ALL25943...... 14" Bottom Black

ALL25942 14" Top Black
ALL25943 14" Bottom Black
ALL25944 1/2" Sure Seal Spacer (places air cleaner base
1-1/8" below carb neck sealing flange)

ALL25945 1" Sure Seal Spacer (places air cleaner base 5/8" below carb neck sealing flange)

ALL25946...... 1-1/2" Sure Seal Spacer (places air cleaner base 1/8" below carb neck sealing flange)

ALL25947 2" Sure Seal Spacer (places air cleaner base 3/8" above carb neck sealing flange)

14" Aluminum Air Cleaner Kits

Low profile, spun aluminum air cleaner kits have a plain or black finished lid, a base for carburetors with 5-1/8" necks and O-ring spacers for a positive seal. Elements sold separately.



ALL26094..... Plain Kit With 1/2" Spacer ALL26097..... Black Kit With 1/2" Spacer

ALL26095 Plain Offset Base Kit With 1/2" Spacer

ALL26098..... Plain Kit With 1" Spacer ALL26099..... Black Kit With 1" Spacer

Individual Components

ALL26090 Plain Top ALL26088 Black Top ALL26092 Standard Base ALL26091 Offset Base

ALL26085..... 1/2" Spacer (places base 1-3/8" below carb neck sealing flange)

ALL26086..... 1" Spacer (places base 7/8" below carb neck sealing flange)

ALL26087..... 1-1/2" Spacer (places base 3/8" below carb neck sealing flange)

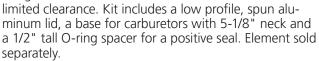
ALL25947 2" Spacer (places base 1/8" above carb neck sealing flange)

ALL26084..... Replacement Spacer O-ring

16" Aluminum Air Cleaner Kit

ALL26096

Larger diameter unit provides increased filter area and air flow over standard 14" air cleaners allowing the same amount of flow when using a shorter element due to



Individual Components

ALL26089 Top **ALL26093** Base

ALL26085..... 1/2" Spacer (places base 1-11/16" below carb neck sealing flange)

ALL26086..... 1" Spacer (places base 1-3/16" below carb neck sealing flange)

ALL26087 1-1/2" Spacer (places base 11/16" below carb neck sealing flange)

ALL25947 2" Spacer (places base 3/16" below carb neck sealing flange)

ALL26084..... Replacement Spacer O-ring



Bob Blount Racing



14" Flat Base Air Cleaner Kits

Lightweight spun aluminum air cleaner kits have a flat base to increase air flow. Kits include a lid, base and a 1/2" spacer with a built-in o-ring for a positive seal. Popular in crate engine classes when



every horsepower counts! Elements sold separately.

ALL25950......Plain Air Cleaner Kit ALL25951.....Black Air Cleaner Kit

Individual Components

ALL25954 Plain Top ALL25955 Plain Base ALL25956 Black Top ALL25957 Black Base

ALL25944..... 1/2" Spacer with O-Ring

Offset Air Cleaner Base

ALL26091

14" base is offset 1" and commonly used for extra distributor clearance. Offset base has a 1-1/2" drop and will fit carburetors with a 5-1/8" neck including Q-Jets, Holley 2bbl. and Edelbrock carburetors without choke. Base will not work with Holley 4bbl. carburetors. Offset air cleaner stud ALL26057 is required.

2BBL. Air Cleaner Base ALL26081

Aluminum air cleaner base has 14" overall diameter. 5/8" drop, plain finish. 3" diameter carburetor flange.

Air Cleaner Adapter ALL26080

Use the more readily available 4bbl. air cleaner on a Rochester 2bbl. carburetor. Accessorize with aftermarket air cleaner and retain stock 2bbl. carburetor and intake. Racing classes using a 2bbl. can benefit from the higher flow of a 4bbl. air cleaner. Made of high strength ABS plastic. Adapter has a 3" I.D. and a 5-1/8" O.D.

Air Cleaner Gasket ALL87207

OE style composite gasket fits most popular carburetors with 5-1/8" neck. Gasket seals air cleaner base to carburetor neck helping prevent dirt and moisture from entering carburetors.

Air Filter Sealing Foam ALL26106

Soft neoprene foam material used for adding an extra seal between the air filter and the lid and base of an air cleaner assembly. Material features a self-adhesive glue on one side to keep seal in place. Material measures 1" wide x 1/4" thick and is 12 ft long.

O-Ring Carb Nuts

Seal air cleaner and eliminate using a wrench to remove air cleaner assembly. Black aluminum nuts have a grooved pattern for non-slip grip.



Short Nut - 5/8" Tall

ALL26045 1/4"-20 Thread **ALL26047** 5/16"-18 Thread

Tall Nut - 1-1/4" Tall ALL26046....1/4"-20 Thread ALL26048....5/16"-18 Thread

Air Cleaner Studs

Straight stud is 6" long with 1/4"-20 threads and includes a wing nut and an adapter for carburetors with 5/16"-18 threads.

ALL26056......Straight Stud With Adapter **ALL26058**.......Adapter, 1/4" -20 to 5/16"-18

Straight Air Cleaner Studs

Studs have 5/16"-18 threads and are 6" long.

ALL26054..... Aluminum ALL26055..... Chrome Moly

ALL26054

ALL26053

ALL26056

ALL26058

Offset Air Cleaner Studs

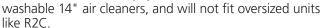
Offset studs work with offset air cleaner bases and some 2bbl carburetors that require offset studs. Studs include mounting hardware and have a 1-3/8" offset.

ALL26057 1/4"-20 **ALL26053** 5/16"-18

ALL26058..... Adapter, 1/4" to 5/16"

Air Cleaner Filters

Mesh filters fit over an air cleaner assembly adding another layer of protection against dirt, dust and debris. Filters fit Allstar paper and



Filters Without Top Cover

ALL26220 14" x 3" ALL26221 14" x 4" ALL26222 14" x 5"

Filters With Top Cover ALL26224 14" x 4"

Air Cleaner Cover

Water-repellent cover fits 14" diameter air cleaner assemblies from 3" to 6" tall. Perfect for washing or storage and includes a draw string.



*ALLETAN





Paper Air Filter Elements

High performance paper air filter elements increase air flow.

ALL26020 14" x 3" ALL26021 14" x 3-1/2" ALL26022 14" x 4" ALL26023 14" x 5" ALL26028 16" x 3" ALL26029 16" x 3-1/2" ALL26030 16" x 4"



Washable **Air Filter Elements**

Washable air filter elements offer better engine protection and increase air flow for more power

and torque. Elements are pre-oiled and available in four heights.

ALL26000..... 14" x 3" ALL26002 14" x 4" ALL26004..... 14" x 5" **ALL26006**..... 14" x 6"



Unique 14" diameter element replaces traditional metal lid to increase air flow for more horsepower and torque. Washable element may be cleaned and used over and over. Top element is pre-oiled and ready for installation.

Air Filter Cleaner ALL78222

Spray solution directly onto dirty air filter. Allow a brief time to soak, 5-10 minutes then rinse clean with water. For use with Allstar washable air filter elements. Plastic 24 oz. bottle.

Filter Cleaning Station ALL26009

Filter cleaning station simplifies and speeds up the process of servicing 14" washable air filters. Spray air filter with a cleaner/ degreaser as recommended by filter manufacturer. Allow a brief time to soak and then flush clean with a garden hose. Allow filter to dry completely then apply an even application of filter oil, if applicable. For use with washable filter elements only.

Carb Hats

Carburetor hats are ideal to cover open carbs and prevent debris from falling into the engine while working in

garage or pit area with air cleaner removed. 2-1/2" tall carb hats are designed to fit most carbs or throttle bodies with a 5-1/8" diameter neck.

ALL26043

ALL26040



ALL26044

ALL26042..... Plastic With Screen

ALL26043 Aluminum

ALL26040..... Plastic

ALL26044..... Aluminum, With Sealing O-Ring

Note: Hats will not clear choke linkage or shaft on Holley style carbs but will clear choke horn with choke linkage and shaft removed.

Dominator Carb Hat ALL26041

Plastic carb hat is 2-3/8" tall and fits over the 7-1/4" air cleaner opening of Holley Dominator carburetors to prevent water or debris from entering the engine. Solid cover may be drilled when an air cleaner stud is used.

Sprint Car Wash Plug Set

Aluminum plugs have O-rings for a watertight seal and will keep dirt out of injectors while cleaning sprint car. 4-piece set comes with a nylon storage pouch.



ALI 26072

Part No.	Size	Wash Plug Dia.	Stack Dia.	
Kinsler				
ALL26072	2-1/4"	2.328"	2.335"	
ALL26073	2-11/16"	2.762"	2.790"	
ALL26074	2-3/4"	2.848"	2.875"	
ALL26075	2-13/16"	2.921"	2.950"	
ALL26076	2.90"	2.973"	3.00"	
Engler				
ALL26033	2-1/2"	2.632"	2.650"	
ALL26035	2-13/16"	2.885"	2.905"	
ALL26036	2.90"	2.973"	3.00"	
ALL26038	3"	3.073"	3.10"	
Hilborn				
ALL26032	2-7/16"	2.483"	2.50"	

Air Pans

Lightweight aluminum air pans fit between the carburetor and cowl area to keep engine heat away from and direct cool air to the carburetor. Cooler intake air means extra horsepower. Carb mounting flange is uncut.

ALL26100 Stepped Plenum ALL26101 Flat Plenum





Universal Plastic Air Pan ALL26104

Durable plastic pan fits over the base of most 14" air cleaners and acts as a cold air box sealing off the air cleaner assembly from the engine heat. Universal fit pan is designed for vehicles



ALL23274

with air cleaner openings in the hood and will require additional trimming and sealing for a proper fit. Pan measures 18" x 4" and includes a silicone air cleaner base seal.

Dragster Scoops

ALL23270 ALL23272 Strong yet lightweight, fiberglass scoops have a durable, black high-gloss, seamless gelcoat finish. Complete installation on 4500 series carburetors requires a scoop tray mounting kit, which mounts between carb and intake manifold to secure ALL23288 scoop tray. Scoops are typically secured to tray with quick turn fasteners and hardware (sold separately).

	Overall		
Part No.	Overall Height	Length	Width
ALL23270	16"	33"	14"
ALL23272	15-1/2"	25-1/2"	14"
ALL23274	20-1/2"	29-1/2"	14"

Dragster Scoop Trays

Scoop tray is the lower portion of the scoop or plenum that directs air into the carburetor when used with dragster style scoops. Tray measures 21-5/8" L x 13-1/2" W and requires a separate scoop tray mount ALL23268 which supports the tray above the carburetor providing a secure mounting point for scoop.

Flat Mount

ALL23266 Aluminum Tray for 4150 Series Carb ALL23267 Aluminum Tray for 4500 Series Carb Raised - 3" Tall

ALL23268 Aluminum Tray for 4150 Series Carb ALL23269 Aluminum Tray for 4500 Series Carb **ALL23288** Fiberglass Tray for 4500 Series Carb

Scoop Tray Mounts

Scoop tray mounts offer an all in one solution to mount a scoop tray, throttle, and nitrous solenoids. Mounts provide a clean look, eliminating the need to use multiple brackets, mounts and gaskets. CNC machined from 6061 aluminum, black anodized.

Standard Mounts ALL54302 4150 (1.755" Bore) **ALL54304**..... 4500 (2.375" Bore) Mounts w/ Nitrous Solenoid Mounts ALL54306 4150 (1.755" Bore)

ALL54308..... 4500 (2.375" Bore)

Hood Scoops



Scoops are molded from durable high impact plastic with carbon fiber look and have a molded-in flange for easy mounting. Designed for use with 14" air cleaners, scoops protect air cleaners that protrude through the hood from dirt and debris. All scoops surround approximately half of the air cleaner assembly.

Part No.	Description	Height	Center of A/C to Front of Scoop
ALL23230	Short Tapered Front	2-1/2"	12"
ALL23232	Short Tapered Front	3-1/2"	13"
ALL23246	Long Tapered Front	3-1/2"	17"
ALL23247	Long Tapered Front*	3-1/2"	17"
ALL23248	Long Tapered Front	5-1/2"	18"
ALL23249	Long Tapered Front*	5-1/2"	18"
ALL23233	Open Front	3-1/2"	12-1/2"
ALL23235	Flat Front	3-1/2"	15-1/2"
ALL23237	Flat Front	5-1/2"	18"

^{*}Mounting flange has a slight curvature for rolled hoods

Aero Scoops



Aerodynamically designed fiberglass scoops are strong yet lightweight with a durable, black high-gloss, seamless gelcoat finish and a 2" wide mounting flange. Open back scoops have an angled 6" tall rear opening to fit most windshields.

		Overall	Overall	Width
Part No.	Description	Height	Length	w/o Flange
ALL23280	Open Back	13-1/2"	50"	14-1/2"
ALL23282	Open Back	13"	50"	14-1/2"
ALL23284	Closed Back	12"	38"	14-1/2"

Quick Turn Starter Kit ALL19410

Not sure where to start when using quick turn fasteners? Use this kit as a starting point to determine correct fasteners for application. Kit includes two different lengths of Allstar's most popular oval head 7/16" fasteners (five ALL19280 and five ALL19286), ten ALL19330 springs and twenty-five multi-grip rivets.

ALL54304



Aluminum Sheets



Aluminum sheets are 040" thick and available in most popular colors. Sheets with single sided colors have a white painted backside and all sheets have a removable protective film on one side to resist scratches.

4' x 10' (120")

ALL22200 Plain[†]

ALL22201 Chrome on Chrome (Bright Clear)§

ALL22202 White

ALL22203 Xtreme Red

ALL22204 Red

ALL22209 Red on Red

ALL22206 Gloss Black ALL22207 Black on Black, Gloss

ALL22208 Flat Black

ALL22219 Black on Black, Flat

ALL22210 Shell Gray (Medium)

ALL22211 Xtreme Green ALL22212 Pepsi Blue (Light)

ALL22213 Chevron Blue (Medium)

ALL22205 Chevron Blue on Chevron Blue (Medium)

ALL22214 Heron Blue (Dark)

ALL22215 Orange

ALL22244 Vibrant Orange

ALL22216 Yellow

ALL22218 Yellow on Yellow

ALL22217 Xtreme Purple

ALL22245 Silver Metallic

4' x 10'-6" (126")

ALL22480 White on White ALL22482 Black on Black, Gloss ALL22488 Black on Black, Flat

ALL22484..... Red on Red

ALL22486 Chevron Blue on Chevron Blue (Medium)

†Plain finish on both sides

§Bright clear on both sides (side with protective film has chrome appearance)

Tin Snips

Durable tin snips have offset blades to keep hands clear of metal while cutting. Non-slip jaws cut through sheet aluminum and up to 18 gauge low carbon steel. Blade length 1-1/4", total tool length 9-1/4".

ALL11030...... Red, Left Hand ALL11031...... Green, Right Hand



Aluminum And Diamond Plate

Shipped Freight Truck, Ten

Sheet Minimum and Surcharge For A Shipping Pallet.

Deburring Tool ALL11036

A fast and easy way to remove burrs from the edges of machined or cut metals. Five-piece kit includes handle, telescopic blade holder and three unique blades. Handle has built-in storage for blades. Blade holder adjusts from 1" to 5".

Replacement Parts

ALL99328 Replacement Blades, Set of 3

Painted Sheet Steel ALL22243

White painted 24 gauge (.024") steel is lightweight and perfect for building interiors in racing classes that require steel panels or when filling holes in



firewalls or floor pans. 4' x 10' sheet is painted on both sides and one side has a removable protective film to help prevent scratches during handling.

Sharpie Markers



Fine point permanent markers work great for

many uses around the shop or track which includes layout and fabricating, marking tire sizes, gear set ratios, jet sizes, etc. Sold each.

ALL12072..... Black **ALL12073**..... Silver

Fabrication Pencils

Pencil works well for marking lines during metal layout and fabrication. Multiple uses include marking



steel tubing for cutting or notching and marking patterns on painted aluminum or steel sheet metal. Silver reflective marks work best against darker surfaces during cutting or welding for high visibility. Pencil marks are resistant to torch flames and will not burn or rub off.

ALL12064 Pencil, 3-Pack

ALL12066 Mechanical Pencil, With Six Refills

Body Roller

ALL23102



This handy "highside" body roller allows you to straighten body and deck panels while still on the car! A must-have item for at-track repairs.



Step Drill Sets

Drill multiple size holes with one bit. Drill sheet metal and aluminum without deforming or distorting. Bits start on contact, deburr and chamfer while drilling and do not require a center punch. Titanium nitride coated high speed steel. 1/4" shank.



Drill Bit	Sizes	
ALL11040 (3-F	Piece Set)	
Six Step	3/16", 1/4", 5/16", 3/8", 7/16", 1/2"	
Nine Step	1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4"	
Thirteen Step	1/8", 5/32", 3/16", 7/32", 1/4", 9/32", 5/16", 11/32", 3/8", 13/32", 7/16", 15/32", 1/2"	
ALL11041 (2-Piece Set)		
Eleven Step	1/4", 25/64", 35/64", 11/16", 13/16", 7/8", 1", 1-1/8", 1-7/32", 1-1/4", 1-3/8"	
Twelve Step	3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8"	

Aluminum Panels

Universal panels have many uses around the shop or at the track. Panels work well when fabricating spoiler sides, interior panels or on uneven pit areas as a floor jack plate. 24" x 48".

ALL22236 0.063 "Thick ALL22237 0.090" Thick **ALL22238**..... 0.125" Thick

Diamond Plate Aluminum ALL22240

4' x 8' sheets are .063" thick and provide an attractive, shiny, non-slip finish for trailer floors, steps, etc.



Aluminum And Diamond Plate Shipped Freight Truck, Ten **Sheet Minimum and Surcharge** For A Shipping Pallet.

Cleco Pin Fastener Kits

Cleco pins are reusable and easily make a temporary connection between pieces of sheet metal during fitting. Pins will work with thicknesses up to 1/4". Kits include pliers and 10 pins.

ALL18221 Kits with 1/8" Pins ALL18225 Kit With 3/16" Pins

Steel Plate

Steel plate is useful for many building projects or fabricating

brackets. 10 gauge (1/8" thick) mild Steel plate is ideal for adding a protective cover to the driver's side floor or door bar area of circle track cars.

ALL54070 18" x 26" ALL54071 24" x 24" ALL54072 24" x 36"

Deluxe Air Rivet Gun ALL18207

Heavy duty air rivet gun can be used with steel or aluminum rivets from 3/32" to 3/16".

Replacement Part

ALL18209 Jaw Set

ALL99255 Nose Piece Set 3pcs ALL99256 Mandrel Cup



Stainless Wire Screen

Use screen to protect radiators, oil coolers or other items. Size referenced is the approximate opening of the screen.



ALL22260 12" x 36" ALL22262 36" x 36"

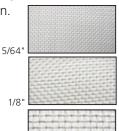
1/8" (.035" Wire Diameter)

ALL22265 12" x 36" ALL22267 36" x 36" ALL22268 36" x 48"

3/16" (.047" Wire Diameter)

ALL22270 12" x 36" ALL22272 36" x 36" ALL22273 36" x 48"







Punch And Flare Tools

Add strength and a smooth finish to hole edges. Unique tools can be used to punch and flare new holes, or to flare existing holes. Starting with a small center hole, the punch halves bolt

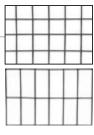
together to cut and flare at the same time. Note: This tool will cut a hole in up to 20 gauge (.0359") steel or 18 gauge (.0403") aluminum. Hole size is increased about 1/8" when hole is flared.

ALL11070..... 1-1/2" ALL11075 2-1/2" ALL11072..... 1-3/4" ALL11076 2-5/8" ALL11074.....2" ALL11078 3"

Steel Wire Screen

Electrically welded steel screen is used for a variety of applications when additional protection is needed. Screen is 2' x 2', constructed of .080" diameter wire and galvanized for corrosion resistance.

ALL22276 1" x 1" ALL22277 1" x 2"





4' x 8' Plastic Sheets



HDPE sheet plastic is 4' x 8' and available in two thicknesses .070" and .100". The .070" thick sheets are the same thickness as our rolled plastic and available in black and white. The .100" thick sheets are available in many of the same colors as our rolled plastic.

ALL22246 0.070", White **ALL22248**..... 0.070", Black ALL22460 0.100", White **ALL22461** 0.100", Black ALL22462 0.100", Red

ALL22464..... 0.100", Chevron Blue (Med.)

ALL22465 0.100", Orange **ALL22466**..... 0.100", Yellow

Rolled Plastic

HDPE rolled plastic is 24" wide by .070" thick commonly used for spoilers, skirts, body patchwork, etc. Sold in pre-cut lengths (10', 25' and 50').



Color	10' Roll	25' Roll	50' Roll
Black	ALL22400	ALL22401	ALL22402
White	ALL22405	ALL22406	ALL22407
Red	ALL22410	ALL22411	ALL22412
Orange	ALL22420	ALL22421	ALL22422
Yellow	ALL22425	ALL22426	ALL22427
Purple	ALL22430	ALL22431	ALL22432
Pepsi Blue (Light)	ALL22415	ALL22416	ALL22417
Chevron Blue (Med.)	ALL22440	ALL22441	ALL22442

Polycarbonate Sheeting

Scratch Proof -

Material does not scratch easily when hit by debris, or when cleaned. Most popular for windshields, but also may be used for side and rear windows.

Standard – Less expensive, commonly used for side and rear windows. Can also be used for windshields, but scratches easily.

ALL22220 36" x 72", 0.118" Scratch Proof, 2-Sides ALL2223 40" x 72", 0.118" Scratch Proof, 2-Sides ALL2222 72" x 96", 0.118" Scratch Proof, 2-Sides* ALL22228 40" x 72", 0.093" Standard ALL22224 40" x 72", 0.118" Standard ALL22226 72" x 96", 0.118" Standard*

*Must ship via Truck Freight

Sheet Plastic

Plastic material is 1/4" thick and useful for many projects including building custom nose supports or front splitters.

ALL22231 15" x 48" ALL22232 30" x 48"

Body Support Panel

ALL23068

Lightweight aluminum panel features punch/flare holes and 90° flanges to easily connect body braces. Commonly used on template body asphalt car rear guarter panels yet universal enough for use in other locations. 4.5" tall x 30" long with 1" flanges. Sold each.

Related Part

ALL23020..... Adjustable Steel Brace (16" to 27") ALL23021 Adjustable Aluminum Brace (21" to 26")

ALL23021

Modified Nose Support

ALL23073

Spring steel support fits under the nose panel for structural support and eases mounting of nose valances.

Nose Support For Template Nose

Lightweight aluminum nose support features punch/flare holes and predrilled mounting holes for easy installation to the nose and the chassis. Sold each.

ALL23066 LH Support ALL23067 RH Support

Related Parts

ALL23020 Adjustable Steel Brace (16" to 27") ALL23021 Adjustable Aluminum Brace (21" to 26")



Kody Swanson

120° End View

120°

90°

End View

End View



Late Model Body Brace Kits



Pre-drilled aluminum kits simplify installation of body panels. Both kits include the following braces: two 30" long 120° lower quarter, two 26" long 90° upper quarter and two 10" long 90° front fender. ALL23105 kit also includes three 66" long 90° door

braces, where the ALL23107 kit includes two 66" long 90° and one 66" long 120° door braces. Use flat stock, spring steel, or



ALL23105 Body Brace Kit ALL23107 Body Brace Kit

Modified Body Brace Kit ALL23106



Pre-drilled aluminum kit simplifies installation of body panels. Two 66" long 90° door braces, two 30" long 120°

lower quarter and two 26" long 90° upper quarter pieces are included. Use flat stock, spring steel, or slotted





Frank Heckenast Jr.

Reinforced Aluminum Angle, 120°

Aluminum angle has many uses including strengthening body panels and providing a mounting point for strapping or body braces, typically used on the lower section of rear quarter panels and doors. The reinforced design adds additional strength over standard 120° angle with an extra bend which also allows easier access to body brace bolts. Angle allows supports or braces to angle upward toward the chassis. Angle is 1/8" thick x 1-1/2" wide and has predrilled 1/4" holes on 1" centers.

Long
Long, 5-Pack
Long
Long, 5-Pack
Long
Long, 5-Pack

Aluminum Angle, 120°

Aluminum angle has many uses including strengthening body panels and providing a mounting point for strapping or body braces, typically used on the lower section of rear quarter panels. 120° angle allows supports or braces to angle upward toward the chassis. Angle is 1/8" thick x 1" wide and has predrilled 1/4" holes on 1" centers.

ALL23130 26" Long ALL23130-5.. 26" Long, 5-Pack **ALL23131** 30" Long ALL23131-5 .. 30" Long, 5-Pack ALL23132 66" Long ALL23132-5.. 66" Long, 5-Pack

Aluminum Angle, 90°

Aluminum angle has many uses including strengthening body panels and providing a mounting point for strapping or body braces, typically used on the upper section of rear quarter panels and door panels. 90° angle allows supports or braces to fasten directly to the chassis. Angle is 1/8" thick x 1" wide and has pre-drilled 1/4" holes on 1" centers.

ALL23134 26" Long ALL23134-5.. 26" Long, 5-Pack ALL23135 30" Long ALL23135-5.. 30" Long, 5-Pack ALL23138 66" Long ALL23138-5.. 66" Long, 5-Pack

Slotted Aluminum Angle, 90°

ALL23124

Slotted angle aluminum brace connects and strengthens body panels. Brace is 1/8" thick x 1" wide x 72" long with 3/8" x 5/8" slots. Ideal for use along tops of spoilers.





Aluminum Angled Stock

1" x 1" aluminum 6063-T5 stock is ideal for fabricating mounting brackets, etc.



Steel Angled Stock

Steel angled stock is ideal for building projects around the shop or creating supports when needed. Standard grade steel has excellent welding characteristics and is easily cut and shaped.

Description	4' Length	8' Length	12' Length
1" x 1" x 1/8"	ALL22156-4	ALL22156-8	ALL22156-12
1-1/2" x 1-1/2" x 1/8"	ALL22157-4	ALL22157-8	ALL22157-12
2" x 2" x 1/8"	ALL22158-4	ALL22158-8	ALL22158-12

Aluminum Square And Rectangular Tubing

Tubing is 6063-T5 grade alloy with .125" wall thickness. Ideal for fabricating rub rails or building shop, trailer or pit equipment like ladders, pit carts and tire racks.



Aluminum Flat Stock

Aluminum 6063-T5 flat stock is ideal for fabricating mounting brackets, etc.

Description	4' Length	8' Length	12' Length	16' Length
Flat Stock 1" Wide				
1/8" Thick	ALL22250-4	ALL22250-8	ALL22250-12	ALL22250-16
3/16" Thick	ALL22251-4	ALL22251-8	ALL22251-12	ALL22251-16

Steel Flat Stock

Steel flat stock is ideal for building projects around the shop or creating supports when needed. Standard grade steel has excellent welding characteristics and is easily cut and shaped.

Description	4' Length	8' Length	12' Length
1" x 1/8"	ALL22150-4	ALL22150-8	ALL22150-12
1" x 3/16"	ALL22151-4	ALL22151-8	ALL22151-12
1-1/2" x 1/8"	ALL22152-4	ALL22152-8	ALL22152-12
2" x 1/8"	ALL22154-4	ALL22154-8	ALL22154-12
2" x 3/16"	ALL22155-4	ALL22155-8	ALL22155-12

12 FT. AND LONGER LENGTHS FOR LOCAL PICKUP ONLY!

Flexible Body Brace Kit



Flexible brace attaches to body or nose panels allowing them to bend then return to original shape, minimizing panel damage. Kit includes all components to build or assemble a flexible body brace up to 33" long with 1/4" ends that crimp to flexible rod with a standard impact crimper (ALL76135) or by using a hammer and punch.

Replacement Parts

ALL23081 Body Brace Rod Only ALL23082 Body Brace Ends, 2-Pack

Flexible Body Brace



Flexible brace made from plastic extends up to 31" and may be cut to fit shorter applications. Commonly used to support lower quarter panel or nose sides. Aluminum brackets are adjustable to accommodate a variety of straight and angle applications.

ALL23075 Body Brace ALL23075-4.. Body Brace 4-Pack

Spoiler/Body Brace



Mount a spoiler or use as a support for lower quarter panel or nose. Can be shortened as needed. Sold each.

ALL23020 Steel, Natural, Adjusts 16" to 27" ALL23021 Aluminum, Black, Adjusts 21" to 26"



Dona Marcoullier



Mike Harrison

ALL18655

ALL18561



Plastic Body Strap

Connect and support body panels to the chassis of most race cars. Durable plastic strap is easily drilled and cut to length, making it an excellent choice for body strapping. Strap is 48" L x 1" W.

ALL23088..... Body Strap, Single ALL23088-4 Body Strap, 4-Pack

Slotted Body Strap ALL23120

Connect and support body panels on the chassis of most race cars. 3/16" thick x 46" L x 1" W aluminum strap has 1/4" slots every inch. Use with ALL23105 body brace kit for complete body installation.

Spring Steel ALL23110

Use to make braces when hanging body and fender pieces. Hardened and tempered coil is 40' L x 1" W x .062" thick.

Shrink Sleeve For Spring Steel

Shrink sleeve works great when doubling up 1" wide spring steel.

ALL23112 25' Long Roll ALL23113 100' Long Roll

Hammer Type Spring Steel Punch ALL23116

Hammer type punch places a 1/4" diameter hole 1/2" from the end of most 1" x .062" thick spring steel material. Punch features a built-in stop which positions the material for accurate hole placement. Punch needs to be placed on a hard surface (i.e. concrete floor, steel anvil, etc.) and struck lightly with a 3 to 4 lb. hammer.

Replacement Part

ALL99013 Mandrel For ALL23116

Impact Gun Spring Steel Punch ALL23117

Impact gun style punch places a 1/4" diameter hole 1/2" from the end of most 1" x .062" thick spring steel material. Punch features a built-in stop which positions the material for accurate hole placement. Punch may be placed in a vice or handheld and impact gun driven using a 3/4" socket.

Replacement Parts

ALL99014 Mandrel For ALL23117 ALL99173 Mandrel Bolt **ALL99174** Top Plate

Body Bolt Kits

Bolts are designed for easy installation and removal, with ALL18560 a 1/4"-20 thread and a built-in captured washer. Nuts have built-in serrations to prevent loosening. Body bolts are commonly used to fasten body panels and side skirts for easy removal but may be used anywhere a bolt with a captured washer is needed.

Under-Head Length	Color	10-Pack	50-Pack
Onder-nead Length	Black	ALL18553	ALL18553-50
3/4"	Clear	ALL18654	ALL18654-50
	Black	ALL18560	ALL18560-50
1-1/8"			
	Clear	ALL18655	ALL18655-50
	Gold	ALL18561	ALL18561-50



Body Brace Tabs

Mild steel tabs have built-in gussets for added support. Choose tabs that mount parallel or perpendicular to tubing. Package of 4.

Part No.	Description	Thickness	Overall Height	Center Of Hole Height	Hole Dia.
ALL60014	Round Tube, 1/4" Hole	1/8"	1-1/2"	1"	1/4"
ALL60015	Round Tube, Slotted	1/8"	1-1/2"	7/8"	1/4" x 3/4"
ALL60016	Round Tube, 3/8" Hole	1/8"	1-3/4"	1-1/4"	3/8"
ALL60017	Round Tube, 1/2" Hole	1/8"	1-3/4"	1-1/4"	1/2"
ALL60041	Round Tube, 1/4" Hole	1/8"	1-3/4"	1-1/4"	1/4"
ALL60086	Round Tube, 1/4" Hole	.085"	1-7/16"	1-15/16"	1/4"
ALL60087	Round Tube, 1/4" Hole	1/8"	1-7/16"	1-15/16"	1/4"
ALL60024	Flat Mount, 3/8" Hole	.085"	1-9/16"	7/8"	3/8"
ALL60027	Flat Mount, 1/4" Hole	.085"	1-9/16"	7/8"	1/4"







ALL60014

ALL60015

ALL60016 ALL60017

ALL60024

ALL60027

ALL60041

ALL60086 ALL60087



1/2" Steel Hood Pin Kits

Kits include two each: 4" long x 1/2" dia. chrome steel pins, chrome steel scuff plates, clips, and four nuts. Available with flip-over or hairpin-style clips.

ALL18512..... Kit With 3/16" Dia. Flip-

Over Clips

ALL18514..... Kit With 5/32" Dia. Hairpin Clips

ALL18513..... Kit With 1/4" Dia. Flip-Over Clips

ALL18514

1/2" Aluminum Hood Pin Kits

Kits include two each: 4" x 1/2" dia. aluminum pins, aluminum scuff plates, flip over style, 1/4" dia. steel clips, and four nuts. Clip flips over pin and over-center action locks clip in place.



Color	Complete Kit	Pins Only, 1-Pair
Silver (Plain)	ALL18500	ALL18507
Red Anodized	ALL18501	ALL18508
Blue Anodized	ALL18502	ALL18509
Gold Anodized	ALL18503	ALL18510
Black Anodized	ALL18504	ALL18511

3/8" Aluminum Hood Pin Kits

Kits include two aluminum 3-1/2" x 3/8" dia. pins, two aluminum scuff plates, two flip over style 3/16" dia. steel clips, and four nuts. Clip flips over stud and locks into place. Over-center action keeps clip in place.

Color	Complete Kit	Pins Only, 1-Pair
Silver (Plain)	ALL18480	ALL18487
Red Anodized	ALL18481	ALL18488
Blue Anodized	ALL18482	ALL18489
Black Anodized	ALL18484	ALL18491

Lightweight Hood Pin Kits

Kits include two 2-3/4" long gun-drilled aluminum pins, two clips, two lightweight aluminum plates and four steel jam nuts.



Hood Pin Supports

Supports thread onto hood pins (before installation) and are a good alternative to sections of rubber hose commonly used to support hoods and deck lids. Once supports are in place, a set screw prevents movement. Supports work with Allstar Performance aluminum hood pins and other fully threaded hood pins. Package of 2.

ALL18478 3/8"-24 **ALL18479** 1/2"-20

Hood Pin Extensions

Aluminum extensions fit into existing chassis mounts. 1/2"-20 male to 1/2"-20 female, with 13/16" thread depth. Sold each.

ALL18524 1-3/4" Tall **ALL18525** 2-3/4" Tall

Hood Pin Adapters

Aluminum adapters convert existing chassis mounts over to hood pin mounts. Sold each.

ALL18526 1/2" Hood Pin Mount To 3/8" Hood Pin, 1/2"-20 Male To 3/8"-24 Female

ALL18527..... Converts 1/2" Coarse Mount To 1/2" Hood Pin, 1/2"-13 Male To 1/2"-20 Female

Universal Hood Pin Mount

Universal bracket with 1/4" mounting holes can be bolted on or welded in place. Bracket accepts 1/2" hood pins to secure hood and deck lids along with many other uses. Constructed of .100" steel, bracket has a built-in reinforcing gusset for added strength.

Hood Pin Mounts

Mounts ease hood pin installation. Choose from threaded boss or tab style.





ALL60005 ALL18520

Part No.	Description	Qty. Per Package
ALL18521	3/8"-24 Hood Pin Boss	2
ALL18520	1/2"-20 Hood Pin Boss	2
ALL60005	1/8" Mounting Tab with 1/2" Hole	4
ALL60006	3/16" Mounting Tab with 1/2" Hole	4



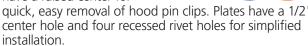
Tyler Spalding

ALL23302



Plastic Scuff Plates

Sturdy plastic scuff plates have a raised center for



Color	4-Pack	25-Pack
Black	ALL18430	ALL18430-25
White	ALL18431	ALL18431-25
Red	ALL18432	ALL18432-25
Blue	ALL18433	ALL18433-25
Orange	ALL18434	ALL18434-25
Silver	ALL18435	ALL18435-25
Pink	ALL18436	ALL18436-25
Purple	ALL18437	ALL18437-25
Fluorescent Yellow	ALL18438	ALL18438-25
Fluorescent Orange	ALL18439	ALL18439-25

Scuff Plates

Scuff plates are used to protect painted finishes from repeated hood pin clip use. Plates are drilled for mounting screws or 1/8" diameter rivets. Package of 4.

Description	1/2" Hole	3/8" Hole
Chrome Steel	ALL18517	_
Aluminum	ALL18518	ALL18519
L/W Aluminum	ALL18471	ALL18470



ALL18516

ALL18506

ALL18517

Hood Pin Clips

The same quick removal pins and clips included with Allstar's hood pin kits. Hair pin clip has a rotated loop for easy grasp and the flip-over clips have a loop with an over center locking feature to keep pin in place. Package of 2.



3/16" Flip-Over Clip With Lanyard

Our most popular size flip-over clip commonly used with hood pins is now available with an added steel lanyard which fastens to body panel for easy installation, and to prevent lost clips. Sold each.

ALL18460 Clip With 6" Lanyard ALL18462 Clip With 10" Lanyard

Steel Lanyards

Steel lanyards feature 1/16" diameter cable with 3/4" loops on each end for light duty applications such as hood pins or retention of similar type fasteners to prevent loss. Sold each.

ALL18461 6" Long **ALL18463** 10" Long

Nylon Lanyards ALL18468

Nylon lanyards feature a molded end with a 3/16" hole on one end and a snap together open loop on the other end to quickly and easily secure a variety of components. Once snapped together, loop is permanently locked. 10" long, package of 4.

Hinge Kits

Use steel hinge kits on hoods and deck lids for quick, one person inspection of engine compartment or trunk area. Universal kits include two complete hinges.

ALL18522 2-1/4" Long, 5/8" Tall, 1/4" Hole **ALL18523** 3" Long, 1-1/4" Tall, 1/4" Hole

Hood Prop ALL23260

Aluminum hood prop is a must for supporting lightweight aluminum and fiberglass hinged hoods or trunk lids commonly found on asphalt template body cars. Prop mounting hole distance is 17-1/4" when open. Sold each.



Covers are constructed of a waterproof material and designed for a precise fit. The template body cover has zippers

to access the interior and at the wheel well openings. The Dirt Late Model cover has zippers to access the engine and driver compartment. Full size covers have reflective

silver finish to reflect heat, a soft cotton inner liner, builtin grommets and elastic banding. Not designed for outdoor storage.

ALL23300 Asphalt Late Model (Template Body)

ALL23301 Template Body Greenhouse Cover

ALL23302 Dirt Late Model*

*Cover is designed for cars with 8" spoiler and sides. Cover will not fit some crate series spoilers.





PERFORMANCE

Hood Scoops



Scoops are molded from durable high impact plastic with carbon fiber look and have a molded-in flange for easy mounting. Designed for use with 14" air cleaners, scoops protect air cleaners that protrude through the hood from dirt and debris. All scoops surround approximately half of the air cleaner assembly.

Part No.	Description	Height	Center of A/C to Front of Scoop
ALL23230	Short Tapered Front	2-1/2"	12"
ALL23232	Short Tapered Front	3-1/2"	13"
ALL23246	Long Tapered Front	3-1/2"	17"
ALL23247	Long Tapered Front*	3-1/2"	17"
ALL23248	Long Tapered Front	5-1/2"	18"
ALL23249	Long Tapered Front*	5-1/2"	18"
ALL23233	Open Front	3-1/2"	12-1/2"
ALL23235	Flat Front	3-1/2"	15-1/2"
ALL23237	Flat Front	5-1/2"	18"

^{*}Mounting flange has a slight curvature for rolled hoods

Aero Scoops

Aerodynamically designed fiberglass scoops are strong yet lightweight with a durable,

ALL23284

black high-gloss, seamless gelcoat finish and a 2" wide mounting flange. Open back scoops have an angled 6" tall rear opening to fit most windshields.

Part No.	Description	Overall Height	Overall Length	Width w/o Flange
ALL23280	Open Back	13-1/2"	50"	14-1/2"
ALL23282	Open Back	13"	50"	14-1/2"
ALL23284	Closed Back	12"	38"	14-1/2"

Dragster Scoops

Strong yet lightweight, fiberglass scoops have a durable, black high-gloss, seamless gelcoat finish. Complete installation on 4500 series carburetors requires



a scoop tray mounting kit, which mounts between carb and intake manifold to secure ALL23288 scoop tray. Scoops are typically secured to tray with quick turn fasteners and hardware (sold separately).

	Overall		
Part No.	Overall Height	Length	Width
ALL23270	16"	33"	14"
ALL23272	15-1/2"	25-1/2"	14"
ALL23274	20-1/2"	29-1/2"	14"

Dragster Scoop Trays

secure mounting point for scoop.

Scoop tray is the lower portion of the scoop or plenum that directs air into the carburetor when used with dragster style scoops. Tray measures 21-5/8" L x 13-1/2" W and requires a separate scoop tray mount which supports the tray above the carburetor providing a

Flat Mount

ALL23266 Aluminum Tray for 4150 Series Carb ALL23267 Aluminum Tray for 4500 Series Carb Raised - 3" Tall

ALL23268 Aluminum Tray for 4150 Series Carb ALL23269 Aluminum Tray for 4500 Series Carb **ALL23288** Fiberglass Tray for 4500 Series Carb

Scoop Tray Mounts

Scoop tray mounts offer an all in one solution to mount a scoop tray, throttle, and nitrous solenoids. Mounts provide a clean look, eliminating the need to use multiple brackets, mounts and gaskets. CNC machined from 6061 aluminum, black anodized. Standard Mounts

ALL54302 4150 (1.755" Bore) ALL54304..... 4500 (2.375" Bore) Mounts w/ Nitrous Solenoid Mounts **ALL54306**..... 4150 (1.755" Bore **ALL54308**..... 4500 (2.375" Bore)



Dial-in boards are a great alternative to messy shoe polish when displaying your ET dial-in. Highly visible



ALI 23268

3" tall white numerals help to ensure correct times are entered at the tower. Each numeral has seven pivoting sections that are easily changed to quickly adjust dial-in time. Available with mounting holes for a standard dial-in board bracket or ALL23293 with suction cups and hook/ loop tape.

ALL23291 3 Digit w/Mount Holes ALL23292 4 Digit w/Mount Holes ALL23293 4 Digit w/Suction Cups And Hook/Loop Tape

Dial-In Board Mounts

ALL23297

Two-piece billet aluminum mount fits dial-in boards with 8.75" x 3" mounting hole pat-





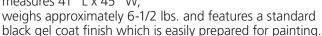
ΔII10488



Outlaw Asphalt Late Model Fiberglass Roof

ALL23204

Fiberglass roof has a molded-in recess to provide a smooth transition for mounting wraparound windshields. Roof measures 41" L x 45" W,



Extended Dirt Roofs

Fiberglass roofs for Dirt Late Model and Modifieds are extended for maximum allowed coverage. 1/2" rolled side rails provide added strength. 54" L x 51" W.

ALL23170 White **ALL23171** Black



ALL23215 Universal Dirt Roof Cap, 50" Wide

Dirt Roofs

Popular fiberglass roofs found on many Dirt Late Models and Modifieds. 46" L x 47" W.

ALL23180 White **ALL23181** Black





Adam Terry



Dirt Roof Cap

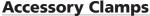
ALL23215

Universal

Universal plastic cap has a simulated carbon fiber look and is wide enough to fit extended and 2-piece dirt roofs. Cap fastens to the leading edge of most roofs to reinforce and protect the leading edge from stone chips. Cap is 50" wide overall.

Rear Roof Support ALL23122

Drilled and slotted aluminum support strengthens Dirt Late Model and Modified rear roof area. Support is 42" L x 7/8" W x 1/8" thick and has 1/4" x 1/2" slots on 1" centers.



Aluminum two-piece clamps are ideal for mounting small parts and accessories or creating an adjustable

clamp-on mount for supporting body or roof panels. Clamps are 1/2" wide and include two 1/4" button head fasteners.

ALI 10456

Size	With 1/4"-20 Mount	With 1/4"-20 Mount And A 1/4" Through Hole
1"	ALL10455	ALL10485
1-1/4"	ALL10456	ALL10486
1-3/8"	ALL10457	ALL10487
1-1/2"	ALL10458	ALL10488
1-5/8"	ALL10460	ALL10489
1-3/4"	ALL10459	ALL10490

Universal Brackets

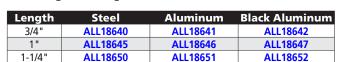
Universal 1/4" thick aluminum brackets may be drilled and tapped, to custom mount just about anything.

ALL10452 1-1/4" **ALL10453** 1-1/2" **ALL10454** 1-3/4"

Flush Mount Bolts

Slotted 1/4"-20 flush mount bolts have a 1" O.D. beveled head to provide a smooth finished appear-

ance. Excellent when securing panels, nose supports, spoiler sides and many other uses. Size noted is under head length. Package of 10.







8" Aluminum Adjustable

Spoiler Kits

Designed for Dirt Late Models, choose from plain or black powder coated finish. Each spoiler



consists of two unequal length laser cut sections, one 16" wide and the other 56" wide. Unequal length design blades provide more down force on the right rear of the car and allow more spoiler area in case of right side damage. Assembled spoilers measure 72" wide x 8" tall with a 1" reinforcing lip. Three vertical supports have 2" of adjustment. Mounting hinges included.

ALL22997 Plain **ALL22999** Black

Replacement Parts

ALL99124 Right Rear Side Support, Black **ALL99125** Right Rear 16" Spoiler Section, Black

ALL99126 Right Rear 16" Hinge, Black

Spoiler Kits Without Side Panels

Due to sanction body variances in side panels, these universal kits offer a good starting point without buying all pieces separately. Kits include rear blade(s) and hinges. 2-piece kit has unequal le

rear blade(s) and hinges. 2-piece kit has unequal length sections.

ALL22974 1-Piece, 2" x 66" **ALL22978** 1-Piece, 5" Tall **ALL22979** 2-Piece, 5" Tall

ALL22983 2-Piece, 8" x 72" (16" And 56" Sections)

Modified Spoiler Kits

Black powder coated aluminum spoilers are 66" wide with adjustable, pre-bent rear blades.

Choose 1- or 2-piece design rear blade. Kits include rear blade(s), side panels and mounting hinges.

ALL22985 1-Piece, 5" Tall, Standard Sides ALL22986 1-Piece, 5" Tall, Large Sides ALL22990 2-Piece, 5" Tall, Standard Sides ALL22991 2-Piece, 5" Tall, Large Sides ALL22993 2-Piece, 7" Tall, Large Sides

Note: Only the 1-piece design is legal for IMCA Sport Mod

Spoiler Supports

Aluminum support has strong 1/4" steel rod ends with hardware. Center tube has left- and right-hand threaded ends for quick adjustments. 1/4"-20 mounting hardware included. Sold each.

ALL23022 6" **ALL23023** 8"



Spoiler/Body Brace



Mount a spoiler or use as a support for lower quarter panel or nose. Can be shortened as needed. Sold each.

ALL23020 Steel, Natural, Adjusts 16" to 27"
ALL23021 Aluminum, Black, Adjusts 21" to 26"

Spoiler Brackets

Aluminum spoiler brackets rivet directly to the rear spoiler and bolt to the side supports. Curved slot allows quick spoiler adjustment. Brackets are sold flat and require a 90° bend for LH or RH use. Package of 2.

ALL23251 4" Tall Bracket For 5" Spoiler ALL23250 6-1/2" Tall Bracket For 8" Spoiler ALL23253 10" Tall Bracket For 12" Spoiler

Rear T-Bar Breakaway

Aluminum breakaway mounts to the right rear t-bar found on most Late Models and Modifieds. 1/8" thick with an overall length of 20" wide but it can easily be cut down to 14".

ALL23255 Plain

ALL23256 Black NEW BLACK VERSION

Aluminum Hinges

Low profile hinge is 2" wide when open and has 7/8" of flat surface on each side of the center pin. Available in 36" and 72" lengths. Commonly used when building spoilers and access doors.

•		
Length/Color	Each	5-Pack
36" Long, Plain	ALL23125	ALL23125-5
72" Long, Plain	ALL23127	ALL23127-5
36" Long, Black	ALL23126	ALL23126-5
72" Long, Black	ALL23128	ALL23128-5

Spoiler Support Bracket ALL23252

Slotted aluminum bracket can be mounted on the deck to make adding a spoiler support fast and simple.



Allen Weisser



Fiberglass Dash Panels

One-piece, sturdy fiberglass dash panel has four outer pods to accept 2-5/8" gauges and



a center area which is perfect for tachometers up to 5" diameter. Wrap around style panel has upper and lower mounting flanges and measures 29" W x 7" tall.

ALL23242..... White **ALL23243** Black

Access Panel Kits	
Aluminum panels can be mounted	
to provide easy access to dry sump	
pump tanks, fuel cells or other	
under panel items. Kits	
include frame, access door,	ALL18532
hinge, quick turn fastener	
and quick turn fastener spring.	
Sizes refer to door opening dimen-	——————————————————————————————————————
sions, add 2" for installed dimensions.	// ALL18541

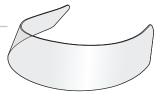
Size	Clear	Black
6" x 6"	ALL18530	ALL18540
8" x 8"	ALL18531	ALL18541
6" x 14"	ALL18532	ALL18542
10" x 14"	ALL18533	ALL18543
14" x 14"	ALL18534	ALL18544

Replacement Parts

ALL18990 Quick Turn Fastener, 10-Pack ALL19300 Quick Turn Fastener Spring, 10-Pack

Windshield ALL23240

Tinted scratch-proof material provides added protection to driver from wind and debris. Shield has rounded edges for a clean, smooth appearance and



measures 30" L x 4-1/4" tall. Commonly used on Dirt Late Models and Modifieds.

Windshield Support ALL23245

Aluminum support mounts to the windshield to help prevent flexing and improve aerodynamics.

Rock Screens

Steel screen mounts to chassis providing driver added protection from rocks and debris. Black powder coated screen is 7-1/2" tall with 2" wide slots. Approximately 1.60 lbs.

ALL30165 25" Long ALL30166 23-3/4" Long

Dirt Skirtz

Minimize clay build up! Unique material is very flexible and virtu-



ALL 23310

ally eliminates clay build up so there is no more need to adjust set up for the added weight of clay. Install on the bottom side of dirt car deck panels, choose width based on panel to cover, install supplied Velcro strips and attach Dirt Skirtz. To clean (if necessary), simply remove and wash.

ALL23309 10" x 23" (Fuel Cell) **ALL23310** 12" x 60"

ALL23312 15" x 60" ALL23314 21" x 60" ALL23316 25" x 60"



ALL23309

ALL23308 Do-It-Yourself Kit Custom build your own Dirt Skirtz. Kit includes a 60" x 60" piece of Dirt Skirtz material that may be cut to desired size and attached with the included Velcro material.

Note: Once Velcro is applied to material, we recommend sewing the two pieces together for best results.

ALL23318 Replacement Velcro Hook Side 1" x 13' ALL23319 Replacement Velcro Loop Side Soft 1" x 13'

Mud-X Concentrate

ALL78230

Mix concentrate with up to ten quarts of water to produce a coating that prevents mud, dirt, oil, rubber and exhaust residue from sticking to body panels. Safe for metal, plastic, rubber, and painted surfaces. One quart container.



Mud-X Cleaner ALL78232

Cleans and shines plastic, polycarbonate, chrome, fiberglass, paint, vinyl and leather and leaves an invisible coating that protects surfaces and repels dirt, dust, fingerprints, smudges and bugs. Spray it on and wipe it off. Excellent anti-fog coating for helmet shields. 14 oz. can.



Pre-Race Dirt Solution ALL78234

Spray directly on the body and underside of your car before entering the racetrack. Helps prevent dirt, oil and rubber from sticking to the frame and body panels. Use direct without water. Half gallon container.



Shipment Only



Metric Brake Rotors

New stock replacement brake rotor includes new bearing races and studs for most intermediate sized Metric chassis cars including Monte Carlo, Grand Prix, and Regal. Rotors measure 10.5" O.D. x 1.03" thick. Bearings and seal not included.



ALL42088

ALI 72160

Note: Both rotors will work with Allstar metric spindles ALL56318 or ALL56319.

1979-81*

ALL42086..... Rotor With 5/8"-11 Wheel Studs, 5 On 5" B.C.

*Outer bearing race has a 1.97" O.D.

Related Parts For 1979-81 Style Rotor

ALL72160 Spindle Nut Kit ALL72164 Front Hub Dust Cap

ALL72305 Master Bearing And Seal Kit

ALL72128 Hub Seal ALL72275 Inner Bearing ALL72277 Outer Bearing



1982-88[†]

ALL42087 Rotor With 12mm-1.50 Studs, 5 On 4-3/4" B.C. ALL42088..... Rotor With 5/8"-11 Wheel Studs, 5 On 5" B.C.

†Outer bearing race has a 1.78" O.D.

Related Parts For 1982-88 Style Rotor

ALL72160 Spindle Nut Kit ALL72164 Front Hub Dust Cap

ALL72306 Master Bearing And Seal Kit

ALL72128 Hub Seal ALL72275 Inner Bearing ALL72278 Outer Bearing



Hybrid Brake Rotor ALL42094

The hybrid rotor combines the versatility of the Granada style hub with a reduced diameter and width. Rotor is a popular choice when used with Mustang II spindles, metric style brake calipers and hybrid caliper brackets. Rotor measures 10-1/8" O.D. x .812" thick, includes 5/8"-11 wheel studs on a 5x5" B.C., weighs 14 lbs and includes new bearing races.

Related Parts

ALL72161 Spindle Nut Kit ALL72164 Front Hub Dust Cap ALL72309 Master Bearing and Seal Kit

ALL72126 Hub Seal ALL72270 Inner Bearing ALL72274 Outer Bearing

Granada Brake Rotor

Rotor is often used when converting stock Mustang II brake assemblies to 11" O.D. x .875" brake rotors and larger calipers. Rotors include new bearing races and install directly to Mustang II spindles with stock bearings and seals (not included).

ALL42090..... Rotor w/ 1/2"-20 Wheel Studs, 5 On 4-1/2" B.C. ALL42091 Rotor w/ 1/2"-20 Wheel Studs, 5 On 4-3/4" B.C. ALL42089..... Rotor w/ 5/8"-11 Wheel Studs, 5 On 5" B.C.

Related Parts

ALL72161 Spindle Nut Kit ALL72165 Front Hub Dust Cap ALL72308 Master Bearing And Seal Kit

ALL72126 Hub Seal ALL72270 Inner Bearing ALL72274 Outer Bearing



GM Rear Brake Rotor ALL42095

Hat style brake rotor with 5 on 4-3/4" pattern can be used with ALL42180 and ALL42181 7.5" metric caliper brackets and stock type axles. 11-5/8" vented rotor is .790" thick and has a 2.800" I.D. center indexing hole to work with most metric style axle flanges with a maximum O.D. of 6".



Late Model And Modified Brake Rotor ALL42011

Lightweight solid rotor for Late Models and Modifieds. Use anywhere reduction of un-sprung weight is desirable. Rotor is scalloped to provide maximum weight loss without compromising braking performance or rotor durability. Rotor is steel 8-bolt with a 7" bolt circle, 11.75" diameter and .250" thickness.

TECH TIP

The term "Metric Chassis" commonly refers to the intermediate line of GM cars built from 1978 through 1988 including the Chevrolet Monte Carlo and Malibu, Oldsmobile Cutlass, Buick Regal and the Pontiac Grand Prix. These chassis are very similar but they also have some differences. One of the major differences applies to the front steering spindles and brake rotors. There were three different brake rotors used and two different spindles. 1978 year vehicles used a spindle/rotor combination that was a one-year production. 1979-88 vehicles used the same spindle but utilized two different brake rotors. These rotors appear very similar but the 1979-81 use a brake rotor with a larger outer bearing and race than the 1982-88 model vears. These rotors may be interchanged but will require the matching outer bearing for proper installation.

ALL42118



40 Vane Directional Rotors

Heavy duty 40 vane brake rotors provide added strength and cooling over standard 36 vane rotors. 11.75" x 1.25" 8 bolt rotors weigh just 11 pounds and have ball milled slots to keep rotor clean.

ALL42004..... LH 1.25" x 11.75" 8-Bolt **ALL42005**..... RH 1.25" x 11.75" 8-Bolt



ALL42004

36 Vane Directional Rotors

Rotors have 36 directional cooling vanes and are 1-1/4" thick x 11-3/4" diameter Directional cooling vanes allow brakes to run much cooler than conventional rotor designs. Rotors fit solid mounting brake hats or hubs.

ALL42000..... LH 1.25" x 11.75" 8-Bolt **ALL42001**..... RH 1.25" x 11.75" 8-Bolt



Rotor Bolt Kit ALL42026

Grade 5, 5/16" bolts fasten disc brake rotors to rotor hat or hub. Includes ten bolts, ten washers and ten self-locking nuts.



Stamped Steel Rotor Hat ALL42120

Brake hat fits 8-bolt rotors with 7" bolt circle mount. Made of stamped steel with a 3" offset and drilled for 4-1/2", 4-3/4" and 5" bolt circles. Hat has 3.060" diameter centering hole and fits axle flanges with up to 5.75" diameter.

eter. Drilled for 1/2" wheel studs. IMCA Legal.

Cast Aluminum Rotor Hats

Cast aluminum hats are available in two offsets, fit 8-bolt rotors with 7" bolt circle mount, have a 3.060" diameter centering hole and fit axle flanges with up to 6.050" diameter. Drilled for 1/2" studs.

ALL42129 2-1/2" Offset, 2.2 Lbs. **ALL42128** 3" Offset, 2.5 Lbs.



Tim WIlber

ALL42129

Rotor Spacer For Dirt Late Models

Minimize caliper damage from debris and maximize cooling capabilities. Rotor spacer bolts to a Wide 5 hub, moving the rotor/caliper inboard and out of the wheel shell. When used on the left rear corner, spacer also helps reduce caliper damage from this common debris area. Made from 6061 aluminum and includes eight mounting bolts.

ALL42014 1.75" Rotor Spacer **ALL42016** 2.25" Rotor Spacer

Mustang II Caliper Brackets

Install 11" Granada style rotors and GM
Metric style calipers on stock height or
lowered Mustang II spindles with these bolton caliper brackets. Lightweight steel brackets
weigh just over one pound each and are sold
individually. Commonly used on Modifieds and stock cars.

ALL42110 LH Caliper Bracket ALL42111 RH Caliper Bracket

Hybrid Mustang II Caliper Brackets

Install smaller hybrid style rotors and intermediate GM Metric style calipers on stock height or lowered Mustang II spindles with these bolt-on caliper brackets. Lightweight steel brackets weigh just one pound each and are sold individually. Commonly used on Modifieds and stock cars.

ALL42118 LH Hybrid Caliper Bracket ALL42119 RH Hybrid Caliper Bracket



Steel bolt-on brackets are used when converting drum brake equipped 7.5" GM style rear ends to disc brakes. 1/4"



thick brackets replace the drum brake backing plates to provide secure mounting for standard intermediate metric calipers (ALL42083 and ALL42084). Use with ALL42095 brake rotor.

ALL42180 LH Bracket ALL42181 RH Bracket



Rear Caliper Brackets

Made from 1/4" thick steel, brackets fit 3" diameter axle housings and work with 11.75" diameter rotors. Available for many setups.



Clamp-On Brackets

ALL42101 Big GM, 7" Spacing

ALL42103 GM Metric, 5-1/2" Spacing, Wide Clamp
ALL42185 GM Metric, 5-1/2" Spacing, Narrow Clamp

ALL42186 GM Metric, 5-1/2" Spacing, Narrow Clamp With

Reinforcing Gussets

ALL42105 Wilwood Dynalite, 5-1/4" Spacing **ALL42109** Wilwood Superlite, 3-1/2" Spacing

Weld-On Brackets

ALL42100 Big GM Style, 7" Spacing ALL42102 GM Metric, 5-1/2" Spacing ALL42104 Wilwood Dynalite, 5-1/4" Spacing ALL42108 Wilwood Superlite, 3-1/2" Spacing

GM Metric Caliper Bracket ALL42133

3-piece modular bracket has the caliper bracket bolted separately for easy installation to a 3" axle tube without removing the rear hub assembly. Specially designed to mount a GM Metric caliper with 5-1/2" bolt spacing to axle tube when using a 11-3/4" diameter brake rotor. Additional locking bolts install into axle tube to help prevent bracket from rotating.

Ford 9" Axle Spacer Plates

Spacer plate takes the place of drum brake backing plate and properly preloads the tapered style axle bearing. Spacers fit large bearing Ford 9" housing ends. Sold each.

ALL72318 Late Torino Style **ALL72319** Early Style

Related Item

ALL72042 Backing Plate T-Bolts (Late Style), 8-Pack



Rodney Sanders

ALL72318

Wilwood Superlite Caliper Bracket ALL42134

Lightweight aluminum caliper bracket bolts together for easy installation to a 3" O.D. axle tube without removing the rear hub assembly. Specially designed to mount a Wilwood Superlite caliper with 3-1/2" bolt spacing to axle tube when using a 11-3/4" diameter brake rotor. Additional locking bolts install into axle tube to help prevent bracket from rotating.

Superlite Caliper Bracket For Bolt On Snouts ALL42137

For use with 8-bolt axle tubes and bolt on snouts where there is no room for a bracket to clamp on the tube. This bracket mates between the tube and the snout and has multiple holes for preference of caliper location.

Brake Line Deflectors

Deflectors mount on caliper or spindle on an open wheel car to protect brake lines and fittings from damage. Sold each.

ALL50250 LH Deflector ALL50251 RH Deflector



Brake Calipers

Stock style calipers are perfect replacements on most GM vehicles and will fit up to 1" wide rotor. Metric inlet thread is 10mm x 1.50 pitch. Big GM inlet thread is 7/16"-20.

ALL42081..... RH 1973-77 Big GM **ALL42082**..... LH 1973-77 Big GM **ALL42083**..... RH 1978-87 Metric GM **ALL42084**.... LH 1978-87 Metric GM

Note: We reference RH (right-hand) or LH (left-hand) based on the caliper being mounted behind the rotor, however, all calipers may be mounted on the front or backside of the rotor.

GM Caliper Bolts

Replacement caliper bolts fit most GM calipers and allow for easy installation and removal. Bolts feature a built-in sleeve to allow for extra caliper travel. Package of 2.

ALL42079 Socket Head, 3/8" Allen **ALL42080** Hex Head, 5/8" Wrench





GM Caliper Spacers

Aluminum spacers for use with stock or stock design aftermarket calipers and thin rotors. Spacers keep the piston safely ALL42040 in the bore of the caliper. Choose from large GM style or midsized GM Metric caliper. Spacers are sold each and may need additional clearance depending on caliper

ALL42039..... GM Metric, .100" Thick **ALL42040**..... GM Metric, .190" Thick ALL42041 Big GM, .190" Thick

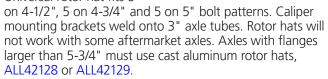
Caliper Spacers

Aluminum spacer is designed to work with non-bridge bolt pads such as Wilwood Superlite, Hawk HB101 series and Performance Friction 7751. Sold each.

ALL42042..... 0.119" Thick ALL42043..... 0.190" Thick

Rear Disc Brake Kit ALL42019

Update and greatly improve braking power by converting standard drum brake rear ends to disc brakes. Universal rotor hat fits 5



million

Kit includes rotors (.810" x 11.75"), universal rotor hats, rotor bolt kits, caliper mounting bolts and caliper mounting brackets for GM intermediate metric style calipers (ALL42083 and ALL42084).

Kit Does Not Have Provisions For Parking Brake

Mustang II Front Disc Brake Kits

Improve the stopping power and safety of cars equipped with Mustang Il spindles. Kits include large 11" brake rotors in choice of bolt patterns, caliper



mounting brackets, calipers, brake pads and installation hardware. Brake hose kits ALL42025 or ALL42032 will help complete the installation.

ALL42024 Disc Brake Kit Rotors With 1/2"-20 Wheel Studs 5 On 4.50" B.C.

ALL42029 Disc Brake Kit Rotors With 1/2"-20 Wheel Studs 5 On 4.75" B.C.

ALL42030 Disc Brake Kit Rotors With 5/8"-11 Studs 5 On

5" B.C. (Brake Pads Not Included)

D.O.T. Brake Hose Kits

Kit includes everything necessary to complete the connection between 3/16" steel brake line and the brake caliper for one axle. Kits include two brake line adapter fittings, steel weld on tabs, retainer clips, banjo caliper fittings, banjo bolts, crush washers, and 16" DOT approved #3 braided steel hoses.

ALL42032 GM Metric Kit With 10mm-1.50 Caliper Bolts ALL42033 Big GM Kit With 7/16"-20 Caliper Bolts

Brake Hose Kits

Kit includes everything necessary to complete the connection between 3/16" steel brake line and the brake caliper for one axle. Kits include two brake line adapter fittings, steel weld on tabs retainer clips, banjo caliper fittings, banjo bolts, crush washers, and 15" #3 braided steel

ALL42025 GM Metric Kit With 10mm-1.50 Caliper Bolts ALL42027 Big GM Kit With 7/16"-20 Caliper Bolts





PERFORMANCE

Brake Duct Hose

Flexible, non-kink hose directs air from front ducts to spindle ducts. Available in 10 ft. lengths and three temperature ranges.

275°: 3" single-ply thermoplastic rubber wall with a spring steel wire support.



300°: 3" or 4" double-ply neoprene coated woven fiberglass hose with spring steel inner and fiberglass external supports. Smooth inner wall for unrestricted flow.

550°: 3" or 4" double-ply silicon coated fiberglass hose with spring steel inner and fiberglass external support. Smooth inner wall for unrestricted flow.

ALL42150 3"X10', 275° **ALL42154**..... 4"X10', 300° ALL42151 3"X10', 300° **ALL42155**..... 4"X10', 550°

ALL42152 3"X10', 550°

Plastic Brake Ducts

Ducts direct outside air to brakes, oil coolers and the driver. 3" O.D. with centered, offset or dual outlets.



ALL42140 Centered, 5-1/2" x 8" ALL42141 Offset, 5" x 9-3/4" **ALL42142** Double Hole. 5" x 9-3/4" **ALL42143** Single Hole, Clear, 6" x 10-3/4" **ALL42144** Double Hole, Clear, 9" x 11"

Brake Duct Hose Flange ALL42160

Flange rivets to nosepiece. 3" brake duct hose can then be hose clamped to flange.

Brake Pedal Mount ALL54060 Welds to chassis to mount Wilwood and Tilton style hanging pedals. Notched to



ALL42144

Spindle Ducts



ALL42113 ALL42112



ALL42115





ALL42117 ALL42116

Aluminum 3" ducts fit most fabricated spindles. Available in dual inlet, light or heavy duty single inlet.

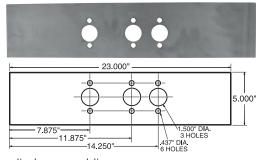
ALL42112 .. LH, Dual **ALL42113** .. RH, Dual ALL42114 .. LH, Heavy Duty ALL42115 .. RH, Heavy Duty ALL42116 ... LH, Lightweight ALL42117 ... RH, Lightweight

Floor Pedal Plate ALL54050

Weld-in pedal plate is 23" x 5" x 1/8" and speeds up race car construction by providing the proper spacing for mounting

Hanging

clear balance bar.



pedal/master cylinder assemblies.

In-Line Duct Blowers







Many uses include cooling brake systems or assisting helmet cooling efforts. CFM ratings at 13.6 volts with a

3.5 amp draw.

ALL13010...... 3" Compact, 5" Long, 140 CFM ALL13008 3" Heavy Duty, 8" Long, 170 CFM ALL13009 4" Heavy Duty, 6" Long, 240 CFM

Pedal **Extensions**



ALL41050 2" Kit - Complete ALL41051 4" Kit - Complete

ALL41052 2" Master Cylinder Kit Only ALL41053 4" Master Cylinder Kit Only

ALL41054 2" Clutch Kit Only **ALL41055** 4" Clutch Kit Only





Hanging Brake Pedal Assembly ALL41014

Universal brake pedal assembly includes everything to install a new hanging brake pedal and is ideal when relocating older style floor mounted brake pedal with under floor master cylinder to a more convenient firewall location. Firewall mounted bracket is pre-drilled to accept Allstar power brake boosters or most manual brake master cylinders and includes a dash support bracket. Multiple pedal mounting holes allow arm to be positioned 5-7/8" to 11-7/8" from firewall mounting plate in 1-1/2" increments for desired pedal placement. Included 3/8"-24 clevis and threaded pushrod may be cut and re-threaded as needed depending on final pedal location.

90° Hanging Brake Pedal Assembly ALL41013

Universal pedal mount positions the booster and master cylinder under the dash 90° to the firewall for a clean underhood appearance and is ideal for vehicles that simply do not have room in the engine compartment for a booster or master cylinder. Bracket has provisions to accept Allstar power brake boosters or to mount a master cylinder directly to the bracket for manual brake applications. Welding required to mount pedal tab to pedal.

Universal Floor Mounted Brake Pedal Assembly ALL41015

Pedal assembly is commonly used when converting under-floor standard single reservoir master cylinder to a power, dual reservoir master cylinder brake system. Pedal assembly will accept Allstar 7" and 8" power brake boosters. Pedal arms feature bushings to resist wear and provide years of use. Pedal assembly does not have provisions for a clutch pedal.

*Universal pedal assembly will work on 1928-32 Fords with modifications

Power Brake Boosters

Boosters are available in 7" or 8" diameter and fit Allstar brake pedals as well as other aftermarket units. For use with ALL41060-41062 master cylinders. The 7" booster is 3-3/4" deep, the 8" booster is 5-1/2" deep.

ALL41005 7", Single Diaphragm, Universal **ALL41006** 8", Dual Diaphragm, Universal

ALL41007 '55-64 Chevy, 7", Single Diaphragm, Standard Finish **ALL41008** '55-64 Chevy, 7", Single Diaphragm, Chrome **ALL41009** '55-64 Chevy, 8", Dual Diaphragm, Standard Finish

Corvette Style Master Cylinders

Dual reservoir master cylinders have 1" bores and outlet ports on both sides for easy plumbing and installation. Popular master cylinders are used with disc/disc and disc/drum manual or power brake applications. Slotted mounting holes on 3-1/4" centers work well with Allstar brake boosters

ALL41060 Cast Iron With 3/8" Ports ALL41061 Aluminum With 3/8" Ports ALL41062 Cast Iron With 1/2" And 9/16" Ports

Big Bore Master Cylinder ALL41064

Master cylinder with large 1-1/4" bore works well on vehicles that require increased volume for proper braking or as an option when experiencing excessive pedal travel with standard 1" bore Corvette style master cylinders. Cast iron master cylinder features a deep hole piston for use with manual or power brakes. Front brake port accepts 3/16" steel brake line with 3/8"-24 inverted flare nut. Rear brake port accepts 1/4" steel brake line with 1/2"-20 flare nut (using included adapter) or 9/16"-18 flare nut by removing adapter.

Master Cylinder Adapter Fittings

ALL41012

Fittings adapt master cylinders or combination valves with 1/2"-20 and 9/16"-18 ports to accept 3/16" inverted flare brake line with standard 3/8"-24 fittings. Kit includes one of each fitting.

Pedal Rod Extensions

Steel extensions have 3/8"-24

threads and are often used to connect the brake pedal to the master cylinder or booster using a female rod end or a clevis.

ALL41027 4-3/4" Long Overall With 3" of Male Thread **ALL41028** 8" Long overall with 1" of Male Thread

Brake Pedal Clevis ALL41026

Clevis fastens to the brake pedal arm to accept a threaded rod extension or power brake booster pushrod. Clevis is threaded for a 3/8"-24 rod and has a 3/8" pin.

Master Cylinder Remote Reservoirs

High-impact plastic remote reservoirs simplify brake bleeding, especially when master cylinder is mounted low in the chassis.

Available with single or dual outlet and may be connected to master cylinder with a 5/16" hose.

ALL42045 Single Outlet ALL42046 Dual Outlet





Plunger Style Brake Light Switch ALL76253

Popular two terminal brake light switch found in most vehicles from the 1950's to today. Ideal for most applications, switch is spring loaded to the on position and turns off when contacted by the brake pedal assembly. Switch has 1/2" threads with jam nuts for easy mounting in a bracket, and two .250" blade type terminals.

Lever Style Brake Light Switch ALL76250

Switch is commonly used with under-floor mounted brake pedal assemblies when switch can contact the brake pedal arm. Spring loaded switch is designed to return to the open position and has two #10-32 tapped mounting holes, 5/8" on centers. ALL76250 Designed for easy two wire connection, one "+" supply and the other to power brake lights or a brake light relay. Switch is rated at 4.5 amps and features two male bullet terminals.

Pressure Activated Brake Light Switches

Switch is plumbed into the brake system and is activated by closing the electrical connection with rising brake pressure (60-120 PSI). Designed for easy two wire connection, one "+" supply and the other to power brake lights or a brake light relay. Switches are rated at 4.5 amps and have 1/8"-27 dry seal mounting threads.

ALL76251 Male Bullet Terminals ALL76252 6-32 Screw Terminals

Residual Check Valves

Residual check valves hold a small amount of pressure in the brake system to keep the brake system functioning properly while helping to maintain a firm pedal. Maintaining system pressure prevents fluid from returning to the master cylinder when the master cylinder is positioned lower than or close to the same height as the calipers or wheel cylinders. Proper system pressure also keeps piston and wheel cylinder seals expanded, creating a positive seal and brake pads seated against the rotor. Valves include two 3/16" inverted flare fittings.

ALL41048 2 Lb. For Disc Brakes (Blue) ALL41049 10 Lb. For Drum Brakes (Red)

Distribution Block With Proportioning Valve And Brake Light Switch ALL48037

Distribution block connects brake lines from the master cylinder to front and rear brakes with the added benefit of a rear proportioning valve and built-in pressure activated brake light switch. The proportioning valve may be adjusted 🔻 🕏 🕏 🕏

to limit rear brake pressure to help prevent rear brake lockup. Block ports have 3/8"-24 threads that accept 3/16" inverted flare style fittings. Block includes installation instructions, fittings, pigtail wiring harness and boot.

Proportioning Valve ALL48025

Adjust front-to-rear brake bias with the twist of a knob. Provides up to 57% reduction. Fitting ports are 1/8"NPT. Valve includes two fittings to adapt to 3/16" brake line. 1" L,

1-3/4" W and 3-5/16" tall.

Combination Valves

Multi-purpose valves are used in the brake system to properly distribute fluid to the front and rear brakes, meter the amount of fluid and pressure delivered to each brake and provide an option to connect a warning light to alert in case of brake failure.

ALL41040 Disc/Drum ALL41042 Disc/Disc

Related Part ALL41044 Connector For Warning Light



ALL41046

Bleeder Tool ALL41043

Tool temporarily replaces the warning light switch in ALL41040 and ALL41042 combination valves to keep the spool valve centered when bleeding the brake system. When bleeding the brake system, the spool valve may be forced to the front or rear and prevent proper system bleeding.

Combination Valve Mounting Brackets

Brackets provide a secure mount for combination valves allowing them to be mounted to the frame or directly under the master cylinder providing access to lines and fittings.

ALL41045 Horizontal Mount Bracket ALL41046 Vertical Mount Bracket

Brake Pressure Safety Switch ALL76255

Brake pressure switch is wired into the ignition system and kills power to ignition when a sudden spike in brake pressure is sensed such as in an accident or emergency. Switch has an adjustable cut-off pressure from 700-1900 PSI and resets automatically when brakes are released. A weatherproof cover protects the inner adjustment screw and seals the 18" long pigtail leads. 1/8"NPT male threads.





Electric Line Lock Kit

Electrically controlled valve engages with a switch, and holds pressure to the front brakes on drag race vehicles. Commonly used to prevent vehicles from rolling once

prevent vehicles from rolling once they have staged or during burn outs in the water box. Detailed installation instructions included.

ALL48012 Electric Line Lock Master Kit **ALL48013** Electric Line Lock Kit With Fittings

ALL48014 Electrical Hardware Kit

Brake Bias Adjuster With Reference Pointer

Know exactly where brake adjustments are set, no more guessing the correct setting. When the adjusting knob is turned, the pointer moves along the reference scale. Adjuster body can be pivoted for easy viewing and multiple applications. Record where the pointer is located and use as baseline adjuster. Housing, internals, brackets and knob with detent are all



NEW BLACK VERSIONS

made of aluminum and includes a five foot adjuster cable with 3/8" - 24 threads that can be cut to any length for a custom fit and has 3/8"-24 threads for most standard pedal assemblies.

ALL42074 Adjuster With Knob Silver **ALL42073** Adjuster With Knob Black

ALL42078 Adjuster With Crank Handle Silver **ALL42077** Adjuster With Crank Handle Black

Replacement Parts

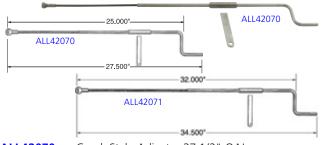
ALL99116 Cable Assembly

ALL99117 Ball, Spring And Set Screw

Brake Bias Adjusters

Adjust brake bias from the driver seat to compensate for changing track conditions. Adjusters mount to balance bars with 3/8"-24 threads.





ALL42070 Crank-Style Adjuster 27-1/2" OAL ALL42071 Crank-Style Adjuster 34-1/2" OAL ALL42072 Knob Style Adjuster with 5' Cable ALL99116 Replacement Cable Assembly

Electric Right Front Brake Shut-Off ALL48017

Disable right front brake with the flip of a switch. Commonly found on Dirt Modified and Late Models, electric shut-off helps turn the car on entry when track conditions are heavy/wet. Kit electronically disables the right front brake yet allows brake pressure to bleed-off from the right front brake caliper, unlike manual shut off valves. Detailed installation instructions are included.

Brake Shut-Off Valve ALL48010

Valve has 1/8"NPT inlet and outlet and is rated at 2,000 PSI. Use Allstar ALL50120 fitting for 3/16" inverted flare brake line. Dimensions: 1/2" W x 1-3/4" L x 1-9/16" H.



RF Brake Shut-Off Valve Decal

Decal has a 5/8" hole and is designed for use with the ALL48010 valve.



Brake Bias Gauge Panels

Gauges show actual front and rear line pressure for making brake bias changes before or during the race. Pre-assembled units have 0-1500psi liquid filled gauges with 1/8"NPT male fittings and bleeder valves to evacuate air from the gauges. 2-3/4" x

4-1/2" pre-drilled panels are offered in horizontal or vertical versions.





Swivel Head Brake Pressure Gauge ALL11020

Gauge temporarily replaces the bleeder screw in most aftermarket brake calipers with 1/4"-28 thread bleeder screws to measure brake pressure. Swivel head positions the 2-3/4" diameter gauge for easy viewing. Convenient remote bleeder can be used to evacuate air in the system for accurate readings.



ALL11022..... Adapter converts ALL11020 and other gauges with 1/4"-28 thread to 10mm-1.50 thread for use with popular GM metric calipers.

Brake Pressure Gauge Kit ALL11026

Brake pressure gauge kit includes two gauges, allowing one gauge to be used in the front and one



in the rear brake system. Compare front to rear pressures to help diagnose problems or to preset your brake bias. Gauges easily replace 1/4"-28 brake bleeders which are commonly found in most aftermarket calipers.



444666

Dirt Race Car Brake Line Kit

Kit allows braided lines to be run throughout a dirt race car. Includes all lines needed to reach from the calipers to

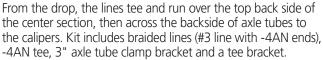
inside the foot box. Due to brand preference and location of pedals, master cylinders and brake shut off, the specific fittings and lines to complete plumbing inside the foot box area will need to be purchased separately. Concerned about brake pressure? This kit 🖣 uses #3 line with

-4AN ends. The #3 line size offers a stiffer pedal feel while utilizing the more popular -4AN ends.

ALL42052..... Kit For Dirt Modifieds With OEM Calipers ALL42053 Kit For Dirt Modifieds With Aftermarket Calipers ALL42054 Kit For Dirt Late Models With Aftermarket Calipers

Rear End Brake Line Kit (Single Line Drop)

Kit is designed to eliminate "hanging" brake lines near the rear calipers. Rear Brake Line Kits utilize a single line drop located near the left side of the center section.



ALL42056.. Kit For Dirt Modifieds (60" Wide) With OEM Calipers ALL42057.. Kit For Dirt Modifieds (60" Wide) w/Aftermarket Calipers ALL42058.. Kit For Dirt Late Models (62" Wide) w/Aftermarket Calipers

Front End Brake Line

Kit Kits include braided lines to reach from the front calipers to inside the foot box. Braided lines are #3 size with -4AN ends. The #3 line size offers a stiffer pedal feel while utilizing the more popular -4AN ends.

ALL42060..... Kit For Dirt Modifieds With OEM Calipers ALL42061 Kit For Dirt Modifieds With Aftermarket Calipers ALL42062 Kit For Dirt Late Model With Aftermarket Calipers

Note: Visit our website for specific components used in these kits!

Deluxe Nylon Brake Line Kits

Deluxe kits feature push lock fittings to ease installation. Kits include 30 feet of line and fittings. Not for

ALL48018..... Kit For Use Without Brake Gauges **ALL48019** Kit For Use With Brake Gauges

Replacement Fittings

ALL48020 1/8"NPT Male To Push Lock Hose ALL48021 1/8"NPT Female To Push Lock Hose ALL48022 Plastic T - All To Push Lock Hose **ALL48023**..... Plastic T - (2) Push Lock, (1) 1/8"NPT ALL50184 1/8"NPT Male Union, 4-Pack

Nylon Brake Line Kit ALL48030

Quickly plumb any race car using an Allstar nylon brake line kit. Kit extends from the master cylinder to the caliper and includes 35 feet of 3/16" line, compression ends. unions, tees and 1/8"NPT fittings. Race proven for years. Not for street



ALL48026 10' ALL48027 50' ALL48028..... 100'

Replacement Brass Fittings For Nylon Brake Line Kit

ALL48032 1/8"NPT Straight ALL48033 1/8"NPT 90°

ALL48034 3/16" Male Union ALL48032 ALL48034 ALL48036

ALL48035 3/16" Male Tee

ALL48036..... 3/16" Captured End Caps, 10-Pack ALL50040..... Caliper Fitting 10mm-1.5 Male To 1/8"NPT

Female 2-Pack (Not Included In Kit. Needed For Use With Metric GM Calipers To Nylon Brake Line)

Braided Steel Lines

A wide selection of braided steel lines in various lengths. All lines come with one straight end and your choice of straight, 45° or 90° on the other end. The inner PTFE hose is compatible with all brake

fluids. The braided stainless steel outer covering resists abrasion and corrosion. Ideal for use where bending and flexing occur. More durable than rubber hose.

See pages 126 to 128 in the Fittings & Hoses section for a complete listing of braided lines, coated and non-coated.



ALL48023

ALL48020







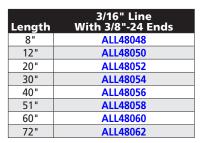






Steel Brake Line

Steel brake line is available in lengths from 8" to 72" for plumbing brake systems. Standard galvanized zinc coating.



Stainless Steel Brake Line

304 Grade stainless steel line has been double annealed for easier bending and flaring. Pre-made lines exceed SAE and DOT requirements and include standard size stainless flare nuts for years of service and show quality finish.



Length	3/16" Line With 3/8"-24 Ends	1/4" Line With 7/16"-24 Ends
8"	ALL48300	ALL48310
12"	ALL48301	ALL48311
20"	ALL48302	ALL48312
30"	ALL48303	ALL48313
40"	ALL48304	ALL48314
51"	ALL48305	ALL48315
60"	ALL48306	ALL48316
72"	ALL48307	ALL48317

Coiled Tubing

Coiled tubing works great for building custom length brake lines without unions. Tubing is easily cut and flared to desired length. Stainless tubing is 304 grade and double annealed for easy flaring and bending. Coiled tubing does not include flare nuts (sold separately).

ALL48040..... 3/16" Standard Zinc, 25' **ALL48308**..... 3/16" Stainless, 20' **ALL48326**..... 1/4" Standard Zinc, 25' ALL48318 1/4" Stainless, 20'.

Gravel Guard Brake Line Protector

Shining and a second Guard protects steel and plastic brake lines against possible damage caused by gravel, rocks and other road/track debris. Zinc coated steel material is placed over tubing or brake line before ends are installed. Sold in 8' long lengths.

ALL48330 3/16" ALL48332 1/4"

Inverted Flare Nuts

3/16" and 1/4" flare nuts are used for building custom brake lines. Nuts are available to fit most master cylinders and metering/proportioning valves. Select proper thread size for line used. Colors listed may vary.

Part No.	Size	Color	Qty.		
Flare Nuts For	Flare Nuts For 3/16" Brake Line				
ALL50110	3/8"-24	Zinc Plated	10-Pack		
ALL50111	3/8"-24	Stainless	10-Pack		
ALL50113	7/16"-24	Red	2-Pack		
ALL50114	1/2"-20	Green	2-Pack		
ALL50115	9/16"-18	Olive	2-Pack		
Flare Nuts For	1/4" Brake Line	e			
ALL50116	7/16"-24	Zinc Plated	10-Pack		
ALL50117	7/16"-24	Stainless	10-Pack		
ALL50118	1/2"-20	Gold	2-Pack		
ALL50119	9/16"-18	Blue	2-Pack		

Tubing Cutters

Cut plastic, aluminum, copper or steel tubing without distorting or crushing. Standard



cutter works with tubing from 1/8" up to 1-1/8" and has wide rollers for even tracking of cutter wheel, built in reamer for cleaning inside of tubing and an extra cutting wheel. Mini cutter can cut tubing from 1/8" to 5/8" in tight areas.

ALL11010..... Mini ALL11011 Standard

Double Flare Tool ALL11015

Double flares 3/16", 1/4", 5/16", 3/8" and 1/2" steel or aluminum and .040" copper tubing at 45°, the most common flare used in custom length brake and fuel lines. Includes instructions and a plastic storage case.

TECH TIP

A few helpful tips to help when flaring stainless steel tubing and prevent splitting the line when flaring. Cut with a hacksaw or cut-off wheel, not a tubing cutter. Using a step drill such a ALL11040, slightly chamfer the inside I.D. of the tubing. Using a bench grinder, slightly bevel the outside edge.

Line Clamps

Choose from rubber cushioned aluminum, nylon or clamp-on aluminum in 3/16" and 1/4".

3/16" Line Clamps

ALL18300 Rubber Cushioned Aluminum, 10-Pack

ALL18310..... Nylon, 10-Pack ALL18320 Clamp-On Aluminum, 4-Pack

1/4" Line Clamps

ALL18301 Rubber Cushioned Aluminum, 10-Pack

ALL18311 Nylon, 10-Pack

ALL18321..... Clamp-On Aluminum, 4-Pack







WARNING PROP. 65 (See Below)

NPT To AN Fittings

1/8"-27NPT steel fittings are commonly used when connecting braided lines to brake calipers, engine oiling systems, etc.





ALL50010 ALL50011



ALL50018 ALL50019



ALL50021



ALI 50020 ALI 50199

ALL50000 1/8"NPT Male To -3AN Straight, 2-Pack ALL50001 1/8"NPT Male To -4AN Straight, 2-Pack ALL50004..... 1/8"NPT Male To -4AN Straight, Tall

ALL50011 1/8"NPT Male To -4AN 45° ALL50018 1/8"NPT Male To -3AN 90° ALL50019 1/8"NPT Male To -4AN 90° ALL50020 1/8"NPT Male To -3AN 90° Tall ALL50021 1/8"NPT Male To -4AN 90° Tall ALL50199 1/8"NPT Female To -3AN ALL50200 1/8 "NPT Female To -4AN

ALL50010 1/8"NPT Male To -3AN 45°

NPT Fittings

Popular brass 1/8"-27NPT fittings used for a variety of applications.



ALL50182



ALL50185



ALL50184



ALL50139

ALL50138

ALL50182 1/8"NPT Plug, 4-Pack ALL50184 1/8"NPT Male Union, 4-Pack ALL50185 1/8"NPT Female Union, 4-Pack ALL50138 1/8"NPT Tee, 2-Pack ALL50139 1/8"NPT Tee, 2-Pack

Caliper Fittings

Commonly used in stock type calipers in place of the banjo fitting and bolt. Fittings allow direct connection to a steel braided line. Fittings are sold in a pack of 2.



ALL50040



ALI 50030 ALL50036



ALL50032



ALL50035

ALL50029 3/8"-24 To -3AN Straight ALL50030 3/8"-24 To -4AN Straight ALL50032 7/16"-20 To -4AN Straight ALL50035 7/16"-20 To -4AN 90° **ALL50037** 10mm - 1.50 To -3AN Straight

ALL50036 10mm - 1.50 To -4AN Straight **ALL50040**..... 10mm - 1.50 To Female 1/8"-27NPT

Banjo Fittings

Banjo fittings are commonly used with banjo bolts and crush washers in stock type calipers to allow direct connection of a steel braided line and allow pivoting the line as needed. Fittings are sold in a pack of 2.

ALL50060 3/8" To -3AN ALL50061 3/8" To -4AN ALL50062 7/16" To -3AN ALL50063 7/16" To -4AN ALL50067 10mm To -3AN ALL50068..... 10mm To -4AN

ALL50066 10mm To -4AN Extended



ALL50066

Banjo Bolts

Banjo bolts are a drilled bolt to allow fluid to pass through and are commonly used with banjo fittings and crush washers in stock type calipers to allow direct connection of a steel braided line. Bolts are sold in a pack of 2.

ALL50070 3/8"-24 **ALL50072** 7/16"-20 **ALL50076** 10mm-1.25 ALL50077 10mm-1.50



WARNING: PROP. 65

The products on this page can expose you to lead, which is known to the State of California to cause cancer, birth defects or other reproductive harm. For more information, go to: www.P65Warnings.ca.gov

Crush Washers

Crush washers are used when sealing metal to metal contact points of banjo fittings and bolts. Soft material conforms to the irregularities of the sealing surfaces. Washers are sold in a pack of 10.

ALL50082 3/8" And 10mm

ALL50080..... 7/16"



Bleeder Fitting With Screw ALL50180

Designed for popular aftermarket calipers, these fittings have 1/8"-27 threads and include a 1/4"-28 bleeder screw. Sold in a pack of 4.



Bleeder Caps ALL50855

Rubber caps keep dirt and moisture out of brake caliper bleeder screw fittings. Caps fit ALL50180 and most other popular small bleeder screws. Package of 10.

Inverted Flare Fittings

An inverted flare fitting is a common brake fitting designed to withstand the high pressures found in braking systems.



ALL50135







ALL50127







ALL50120 3/16" To Male 1/8"-27NPT Straight, 4-Pack ALL50125 3/16" To Male 1/8"-27NPT 3traight, 4-Fack
ALL50127 3/16" To Male 1/8"-27NPT 90°, 4-Pack
ALL50127 3/16" To Female 1/8"-27NPT, 4-Pack
ALL50136 3/16" Tee, 2-Pack
ALL50137 3/16" Tee W/1/8"-27NPT Port
ALL50135 3/16" Tee With 1/8"-27NPT Male Nipple On Side
ALL50183 3/16" Plug, 4-Pack

ALL50130 3/16" Union, 4-Pack

ALL50121 1/4" To 1/8"-27NPT Straight, 4-Pack **ALL50129** 1/4" To 5/16", 2-Pack

ALL50131 1/4" Union, 4-Pack ALL50132 5/16" Union, 4-Pack ALL50133 3/8" Union, 4-Pack

Master Cylinder Adapter Fittings ALL41012

Fittings adapt master cylinders or combination valves with 1/2"-20 and 9/16"-18 ports to accept 3/16" inverted flare brake line with standard 3/8"-24 fittings. Kit includes one of each fitting.



WARNING: PROP. 65

The products on this page can expose you to lead, which is known to the State of California to cause cancer, birth defects or other reproductive harm. For more information, go to: www.P65Warnings.ca.gov

Bolt-In Adapter Fittings

Bulkhead style aluminum fittings adapt 3/16" inverted flare line to an AN type fitting. The 9/16" threaded body with attaching nut can be mounted through a C-channel style frame or a chassis tab.

ALL50104 3/16" To 3AN ALL50105 3/16" To 4AN ALL60092 Weld-On Tabs, 4-Pack



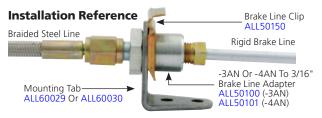
Clip-In Adapter Fittings

Steel adapter fittings provide a bulkhead style connection to AN lines that can be mounted directly to the chassis by using tabs or brackets and retainer clips. Fittings fit in a 5/8" hole and are sold in a pack of 2.

ALL50100 3/16" Inverted Flare To -3AN ALL50101 3/16" Inverted Flare To -4AN ALL50102 1/8"-27NPT To -3AN ALL50103 1/8"-27NPT To -4AN ALL60029 Bolt-on Tabs 2-Pack ALL60030 Weld-on Tabs 4-Pack ALL50150 Retainer Clip 4-Pack



TECH TIP



D.O.T. Legal **Brake Hose Kits**

Kit includes everything necessary to complete the connection between 3/16" steel brake line and the brake caliper for one axle. Kits include two brake line adapter fittings, steel weld on tabs, retainer clips, banjo caliper fittings, banjo bolts, crush washers, and 16" DOT approved #3 braided steel hoses.

ALL42032 GM Metric Kit With 10mm-1.50 Caliper Bolts ALL42033 Big GM Kit With 7/16"-20 Caliper Bolts

Brake Hose Kits

Kit includes everything necessary to complete the connection between 3/16" steel brake line and the brake caliper for one axle. Kits include two brake line adapter fittings, steel weld on tabs, retainer clips, banjo caliper fittings, banjo bolts, crush washers, and 15" #3 braided steel hoses.

ALL42025 GM Metric Kit With 10mm-1.50 Caliper Bolts ALL42027 Big GM Kit With 7/16"-20 Caliper Bolts



Steel Tube Nuts And Sleeves

Steel tube nuts and sleeves are used when making hard line connections to male AN fittings. Line requires a 37° flare for proper sealing. Package of 4.

ALL50300 -3 Tube Nut **ALL50310** -3 Tube Sleeve





ALL50310

ALL50320

90° Swivel AN Fitting

Black anodized aluminum fitting swivels a full 360° for convenient hose connection. 1/8"NPT fitting is commonly used in aftermarket calipers, gauge panels or anywhere a swivel connection would be useful.

ALL50108 1/8 "NPT to -3AN ALL50109 1/8"NPT to -4AN



AN Union Fittings

Black anodized aluminum flare union adapter fittings are commonly used to connect two hoses with female AN ends.

ALL50090 -3AN to -3AN ALL50091 -4AN to -4AN

Aluminum Tube Nuts And Sleeves

Aluminum tube nuts and sleeves are used with corresponding hard lines to connect AN fittings. Line requires a 37° flan sealing. Package of 2.

re for proper	ALL503
ect to male	

Size (Female)	For Tubing O.D.	Tube Nut	Tube Sleeve
-3	3/16"	ALL50320	ALL50330
-4	1/4"	ALL50321	ALL50331

Quick Disconnect Couplings

2-piece couplings allow lines to be separated without loss of fluid or requirement of bleeding. Commonly used on brake systems when changing front or rear axle assembly, hydraulic wing cylinders, a hydraulic clutch system using a hydraulic throw out bearing or when servicing a transmission with an internal hydraulic clutch.



ALL50215 Steel Coupling With 1/8"NPT Female Threads ALL50212 Alum. Coupling With -3AN Male Threads ALL50213 Alum. Coupling With -4AN Male Threads ALL50209 Premium Coupling Fitting With -3AN Male Threads

AN Bulkhead Fittings

Black anodized aluminum bulkhead adapters are perfect when plumbing needs to pass through a firewall, interior panel or a mounting bracket.

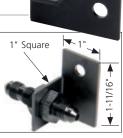
ALL50092 Straight -3AN to -3AN ALL50093 Straight -4AN to -4AN ALL50094..... 90° -3AN to -3AN **ALL50095**..... 90° -4AN to -4AN **ALL50096**..... Tee (Run) -3AN (3x) **ALL50097** Tee (Run) -4AN (3x) ALL50098..... - 3AN Bulkhead Nut ALL50099 -4AN Bulkhead Nut



Bulkhead Mounting Tab ALL60093

One-piece steel mounting tab with 7/16" hole can be bolted to the chassis or rear end to hold bulkhead fittings in place. Bracket is 5/64" thick.





Retainer Clamp ALL68326

Steel clamp is designed to fit around 3" O.D. axle tube and mount other brackets or keep brackets in place. Lightweight clamp has 1/4" mounting hardware and a powder coated black finish.



Half Clamp Brackets

Unique brackets are a must when clamping completely around tubing isn't possible. Bracket clamps just over ALL10464 halfway around tubing and tightens to create a secure mount for many accessories. 3" bracket can clamp to rear end axle tubes to neatly secure braided lines. Brackets have 3/8" mounting holes.

ALL10464 1-1/4" ALL10468 1-3/4" ALL10466 1-1/2" ALL10470 3"

PERFORMANCE

Brake Bleeder Bottles

Contain the mess of bleeding brakes by capturing fluid in this 16 oz. bottle with a 15" long hose which attaches to most bleeder screws. The removable cap has a built-in fitting to secure the hose during storage to help prevent spills. Choose from a steel lanyard retainer that suspends the

ALL11019 ALL11018 suspension component, or a ' magnet retainer to secure the bottle to a steel object such as a brake drum or rotor during bleeding. ALL11017 has

a magnet retainer and a built-in one way check valve for

one person brake bleeding.

bottle from a chassis or

ALL11019 Bottle With Lanyard **ALL11018**..... Bottle With Magnet

ALL11017 Bottle With Magnet And Check Valve

ALL99435..... Replacement Hose



than standard paper towels and work great for numerous tasks around the shop or track. Rolls contain 60 individually perforated 11" x 9-1/2" disposable sheets.

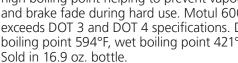




Motul 660 Brake Fluid

ALL78118

100% synthetic brake fluid has an extremely high boiling point helping to prevent vapor lock and brake fade during hard use. Motul 600 exceeds DOT 3 and DOT 4 specifications. Dry boiling point 594°F, wet boiling point 421°F.



Debbie Farrington



Tom Farrington

Castrol SRF Brake Fluid ALL78115

Castrol SRF brake fluid has a wet boiling point of 518°F (270°C) which exceeds DOT 3 and 4 standards. Do not mix Castrol SRF and other brake fluids, as this will reduce the benefits of Castrol SRF. Sold in 1 liter containers (33.8 ozs.)



AP Radi-CAL R3 (AP PRF) **Brake Fluid ALL78116**

Developed for extreme, high temperature racing conditions with a typical dry boiling point of 617°F and a wet boiling point of 383°F. Conforms to DOT 4 specifications. Sold in 16.9 oz. bottle.



AP Radi-CAL R2 (Super 600) **Hi-Temp Racing Brake Fluid ALL78108**

Designed for extreme, high temperature racing conditions with a dry boiling point of 594°F and a wet boiling point of 383°F. Conforms to DOT 4 specifications. Sold in 16.9 oz. bottle.







100% synthetic brake fluid is specifically designed to resist extreme temperature generated by racing carbon and ceramic brakes. Motul 660 exceeds DOT 3, DOT 4 and DOT 5.1 specifications. Dry boiling point 617°F, wet boiling point 401°F. Sold in 16.9 oz. bottle.





Dirt Late Model 1-Piece Front Bumpers

Our Dirt Late Model replacement bumpers are jig welded to meet OE manufacture specifications, but these are not OE manufactured bumpers. Constructed of 1-1/2" x .065" wall mild steel tubing.

ALL22381

ALL22380 Rocket 2005-2016* **ALL22382** Rocket 2005-2015

ALL22379 XR1*[†] **ALL22381** Mastersbilt **ALL22383** Rayburn

*Bumper has built-in rake for nose clearance. †Will also fit 2005-2017 standard Rockets as well as XR1.

Dirt Late Model 2-Piece Front Bumpers

Our 2-piece Dirt Late Model replacement bumpers are jig welded to meet OE manufacture specifications, but these are not OE manufactured bumpers. Constructed of 1-1/2" x .065" wall mild steel tubing.

ALL22394... Mastersbilt **ALL22393...** Mastersbilt, Gen X **ALL22395...** Rocket 2005-2015** **ALL22396...** Rocket 2005-2015*

*Bumper has built-in rake for nose clearance. ‡Bumper has 2" added to left side.

Dirt Late Model Chrome Moly Bumpers

Our Chrome Moly Dirt Late
Model replacement
bumpers are jig
welded to meet
OE manufacture specifications, but these are not OE
manufactured bumpers. Lightweight
1-1/2" x .049" wall chrome moly front bumpers
offer added strength and about a 25-30% (5-6lbs) weight
savings compared to similar mild steel bumpers.

ALL22340..... Rocket 2005-2016* **ALL22343**..... XR1*†

*Bumper has built-in rake for nose clearance. †Will also fit 2005-2017 standard Rockets as well as XR1.

Dirt Late Model Rear Bumpers

Our Dirt Late Model replacement rear bumpers are jig welded to meet OE manufacture specifications but these are not OE manufactured bumpers. Constructed of 1-1/4" x .065" wall mild steel tubing.

ALL22387 Mastersbilt

ALL22384..... Mastersbilt, Gen X, 1-1/2" x .065" Main Tube

ALL22388..... Rocket, 36" CTC **ALL22389**..... Rocket, 34" CTC

Modified Universal Front Bumper

ALL22375

Bumper has 5" x 5" plate style mounts which measure 44" from outside to outside and can be modified to fit most chassis.

Modified 2-Piece Extended Length Front Bumper ALL22333

Extended length bumper features a 1-1/2" main tube with a 1-1/4" upper hoop that can be easily removed and reinstalled when fabricating a nose. Universal fit bumper extends out 21" from frame mounting brackets that are on 39" center, and weighs approximately 15 lbs.

Modified Rear Bumper Kits

Universal rear bumper kits have fully welded frames and include separate 1-1/4" O.D. mounting tubes, bumper supports and end caps that ALL22336 require welding for a custom fit to a variety of chassis widths. ALL22336 Wide Rear Bumper Kit with straight main tube is built from 1-1/4" O.D. x AII 22337 .065" wall mild steel tubing and measures 54" wide x 11-

ALL22337 Narrow Rear Bumper Kit with bent main tube is built from 1-1/2" O.D. x .065" wall mild steel tubing and measures 43" wide x 12-1/2" tall with a 39" wide fuel cell guard.

1/2" tall with a 34" wide fuel cell guard.

Sprint Stacked Front Bumper ALL22300

Stacked front bumper for improved front end protection is precision bent from steel or aluminum tubing, 1"
O.D. steel tubing, 6" tall x 8" long overall x 19-1/4" wide on center. Weighs less than 4 lbs.

ALI 22384



Aluminum ABC Template Front Bumper

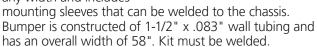
ALL22350

Lightweight front bumper is 56" wide and weighs less than 2-1/2" pounds! Constructed of 1-1/2" x .083" wall aluminum tubing and pre-bent to

match the contours of the template noses.

ABC Template Front Bumper Kit ALL22372

Designed to fit the shape of the ABC style nosepieces, this un-welded bumper kit is universal, can be built to any width and includes



ABC Template Front Bumper ALL22376

Designed to fit ABC style nosepieces, this fully welded front bumper is designed to fit most chassis with 35-1/2" center-to-center mounts. Bumper is constructed of 1-1/2" x .065" wall tubing and has an overall width of 48". Threaded inserts provide mounting points for a hood pin bar.

Asphalt Outlaw Front Bumper ALL22326

Designed to mount Camaro dirt style nose (FIV145-410) to most asphalt late models with 34" outside frame dimensions, including: Howe, Finishline and Lefthander chassis.

Universal Asphalt Outlaw Front Bumper ALL22327

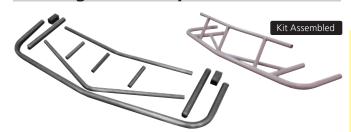
Universal fit bumper has adjustable mounts allowing mounting of Camaro dirt style nose (FIV145-410) or other nose pieces to most Asphalt Late Models, regardless of frame width. Mounts can be positioned as needed along main tube and then bolted or welded in

place. Commonly used on outlaw Asphalt Late Model.

1981 Camaro Front Bumper Kit ALL22320

Universal bumper allows installation of most aftermarket 1981 Camaro nosepieces on any width chassis. Bumper is 1-3/4" x .095" wall mild steel tubing and includes 2" x 2" frame mounting slugs. Kit must be welded.

Mustang Front Bumper Kit ALL22371



Universal bumper allows installation of aftermarket 1993 Mustang style nosepieces on any width chassis. Bumper is 1-3/4" x .095" wall mild steel tubing and includes 2" x 2" frame mounting slugs. Kit must be welded.

Universal Mini Stock Front Bumper

Universal bumper allows installation on a

variety of mini stock applications. Bumper includes 1-3/4" x .095" wall

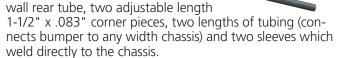
mild steel tubing main bar, two adjustable length 1-1/2" x .083" corner pieces and two 6"x 6" frame mount plates. Bumper can be assembled with a minimum width of 56" and a maximum width of 72" overall.

ALL22328 Unwelded Kit **ALL22329** Welded Kit (corners unwelded)

Universal Rear Bumper Kit ALL22373

Designed to fit any chassis. Corner pieces are slid inside rear section and then welded or bolted to required

width. Includes 1-3/4" x .095'



Related Component ALL22374...... Fuel Cell Guard







Monte Carlo SS Nosepieces

Tough, plastic 1983-88 style nosepieces are perfect for Factory Stock and Sportsman circle track cars.



Color	Complete	LH Driver	RH Passenger
White	ALL23010	ALL23010L	ALL23010R
Black	ALL23011	ALL23011L	ALL23011R
Red	ALL23025	ALL23025L	ALL23025R
Yellow	ALL23026	ALL23026L	ALL23026R
Orange	ALL23027	ALL23027L	ALL23027R
Chevron Blue	ALL23028	ALL23028L	ALL23028R

MD3 Monte Carlo SS Nosepieces

Tough, plastic 1983-88 style nosepieces are perfect for Factory Stock and Sportsman circle track cars.



Color	Complete	LH Driver	RH Passenger
White	ALL23030	ALL23030L	ALL23030R
Black	ALL23031	ALL23031L	ALL23031R
Red	ALL23032	ALL23032L	ALL23032R
Yellow	ALL23033	ALL23033L	ALL23033R
Orange	ALL23034	ALL23034L	ALL23034R
Chevron Blue	ALL23035	ALL23035L	ALL23035R

Monte Carlo SS Headlight Decal Kits

Decal kits add a realistic look to most aftermarket nosepieces to replicate the popular 1983-88 Monte Carlo SS. Decals fit standard and MD3 style nosepieces.



ALL23014 Nose Decal Kit With Stock Grille **ALL23038** Nose Decal Kit With Mesh Grille

Monte Carlo SS Front Bumper Kits



Universal bumper kit is adjustable to accommodate Monte Carlo nosepieces to any chassis. Kits are constructed of 1-3/4" x .095" wall tubing and require welding.

ALL22370 Standard Monte Carlo SS Kit ALL22369 MD3 Monte Carlo SS Kit

ALL22366 Standard Monte Carlo SS Kit, 2-Piece*

ALL22367 Upper Support Kit For ALL22366 (1-1/4" x .083")

*Kit includes a 2-piece main tube for more convenient handling and lower shipping costs.

Monte Carlo SS Bolt-On Front Bumper

ALL22365

Bolt-on style bumper fits most tubular and stock stubs. Bumper accepts standard Monte Carlo SS nosepieces. Frame mounting brackets measure 30" center-to-center and fit over 2" x 3" rectangle tubing.

Flexible Body Brace



Flexible brace made from plastic extends up to 31" and may be cut to fit shorter applications. Commonly used to support lower quarter panel or nose sides. Aluminum brackets are adjustable to accommodate a variety of straight and angle applications.

ALL23075 Body Brace, Each ALL23075-4.. Body Brace, 4-Pack

Spoiler/Body Brace



Mount a spoiler or use as a support for lower quarter panel or nose. Can be shortened as needed. Sold each.

ALL23020 Steel, Natural, Adjusts 16" to 27" **ALL23021** Aluminum, Black, Adjusts 21" to 26"



Monte Carlo SS Rear Bumper Covers



Tough, plastic 1983-88 style rear bumper covers are perfect for Factory Stock and Sportsman circle track cars.

Color	Complete	LH Driver	RH Passenger
White	ALL23015	ALL23015L	ALL23015R
Black	ALL23016	ALL23016L	ALL23016R
Red	ALL23040	ALL23040L	ALL23040R
Yellow	ALL23041	ALL23041L	ALL23041R
Orange	ALL23042	ALL23042L	ALL23042R
Chevron Blue	ALL23043	ALL23043L	ALL23043R

Camaro SS Short Track Nosepieces

Designed specifically for short track use, in Stock Car, Sportsman and similar classes.

Noses



feature minimal recessed pockets, flat lower valiance, corrected width and easier to mount fabricated fenders and hood.

Color	Complete	LH Driver	RH Passenger
White	ALL23045	ALL23045L	ALL23045R
Black	ALL23046	ALL23046L	ALL23046R
Red	ALL23047	ALL23047L	ALL23047R
Chevron Blue	ALL23048	ALL23048L	ALL23048R

Monte Carlo SS Tail Light Decal Kit

ALL23017

Decal kit adds a realistic look to most aftermarket rear bumper covers to replicate the

popular 1983-88 Monte Carlo SS.





Camaro SS Decal Kit ALL23044



Decal kit adds a realistic look to most aftermarket nosepieces to replicate the popular Camaro SS short track nosepiece.

Monte Carlo SS Rear Bumper Kit



Kit includes pre-bent and notched 1-3/4" x .095" wall tubing to assemble a strong rear bumper that can be mounted to any width chassis and support the Allstar Performance and other aftermarket 1983-88 Monte Carlo SS rear bumper covers. Kit must be welded.

Radiator Shaker Screen ALL30160

Commonly used on Dirt Late Models, universal shaker screen is

mounted in front of the radiator on most dirt cars. Unit includes black powder coated aluminum frame, screen, 1/2" x 32" cross rod, springs and retaining clips. Frame dimensions are 17" tall and 25" wide.

Camaro SS Nose Support ALL23058

Plastic nose support is specifically designed to fit

the underside curve of the Camaro SS nosepiece. Support fastens to the underside of the nosepiece to stiffen nose and allowing it to be bolted directly to the bumper. Support fits LH or RH sides and is sold each.



Steven Pena



Sheet Plastic

Plastic material is 1/4" thick and useful for many projects including building custom nose supports or front splitters.





Modified Nose Supports

ALL23073

Spring steel support fits under the nose panel for structural support and eases mounting of nose valances.



Lower Nose Support For MD3 Evolution ALL23064

Plastic nose support is specifically designed to fit the underside curve of the MD3 Evolution style

Dirt Late Model nose piece. Support fastens to the underside of the nose piece and bolts directly to the bumper of most Dirt Late Models. Support is just under 3/8" thick and measures 39" L x 7" W. Support fits LH or RH sides, weighs 3.3 lbs and is sold each.

Nose Support For Template Nose

Lightweight aluminum nose support features punch/flare holes and predrilled mounting holes for easy installation to the nose and the chassis. Sold each.

ALL23066..... LH Support ALL23067..... RH Support

Related Parts

ALL23020 Adjustable Steel Brace (16" to 27")
ALL23021 Adjustable Aluminum Brace (21" to 26")

Flexible Body Brace

Flexible brace

made from plastic extends up to 31" and may be cut to fit shorter applications. Commonly used to support lower quarter panel or nose sides. Aluminum brackets are adjustable to accommodate a variety of straight and angle applications.

ALL23075 Body Brace ALL23075-4.. Body Brace 4-Pack

Dragster Nose ALL23278

Aerodynamic fiberglass nose is strong yet lightweight, with a durable, black high-gloss, seamless gelcoat finish. Nose is 10" tall x 11" W x 29" L with a 1" mounting flange.



Universal Tow Hooks

Universal hooks are designed to be mounted behind the bumper cover providing a quick access point for towing a vehicle to the pit area or back onto the track. Bracket has two 5/16" mounting holes to secure bracket to the frame or inner bumper.

ALL22311 Solid Mount ALL22312 Swivel Mount



Austin Friedman

Trey Goodson

Bumper Hookup Kit ALL22315

Cable kit mounts through the nose and around the bumper for easy wrecker hook-ups. Kit should be mandatory at every race track. Kit includes 3 ft. of coated cable and two clamps.



Kit Shown Assembled



8-Point Roll Bar Kits

Kits increase safety and the structural integrity of the vehicle. Main hoops are custom bent to fit each application precisely. Hoop and bars constructed of .134" mild steel, 1-3/4" diameter tubing. Welding required. Floor plates sold separately for unibody cars.



Kit Shown Assembled

8-Point Roll Bar Kits

ALL22600..... Camaro/Firebird 1967-69 ALL22601 Camaro/Firebird 1970-81 **ALL22602** Camaro/Firebird 1982-92 **ALL22603** Camaro/Firebird 1993-02

ALL22604..... Camaro 2010-15

ALL22608..... G-Body (Monte Carlo, Cutlass, Regal, Grand

Prix) 1978-88

ALL22610 Mustang/Capri 1979-93

10-Point Roll Cage Kits

Kits increase safety and the structural integrity of the vehicle. Main hoops are custom bent to fit each application precisely. Hoop and bars constructed of

.134" mild steel, 1-5/8" diameter tubing. Welding required. Floor plates sold separately for unibody cars.



ALL22620 Camaro/Firebird 1967-69 ALL22621 Camaro/Firebird 1970-81 **ALL22622** Camaro/Firebird 1982-92 ALL22623 Camaro/Firebird 1993-02

ALL22628 G-Body (Monte Carlo, Cutlass, Regal, Grand

Prix) 1978-88

ALL22630 Mustang/Capri 1979-93

Floor Plates ALL22640

Bolt or weld these steel plates to the floor pan as required by most sanctioning bodies when installing roll bars into unibody cars. Increase the structural integrity and provide a solid mounting point for the roll bar. 6" x 6" plates are 1/8" (.125") thick and may also be used for a variety of other uses including fabricating brackets or mounts. Package of 6.

Strut Bars ALL22642

Strut bars increase the rigidity and strength of a chassis eliminating flexing and increasing reaction times. Bars can be installed to upgrade existing ten point cage kits or when building a new chassis. Prebent to fit a variety of applications, bars are 65" long overall with a 14" leg and constructed from 1-5/8" x .134" wall mild steel tubing.

Mini Stock Roll Cage Kits

Cage kits are designed with safety in mind for mini enduro and four cylinder classes and feature pre-cut and formed tubing specifically for the vehicles listed. Kits are constructed of .095" wall x 1-3/4" mild steel tubing and include a main hoop, halo, wind-

shield posts, front and rear dash bars, three door bars for the left side, and a Z-bar for the right side. Kits also include the components to build a sturdy foundation for installing the main cage,

similar to the ALL22650 Welding required.

ALL22096 Honda Civic WEW HONDA GIVIC KIT

ALL22097 Dodge Neon ALL22098 Ford Focus

Replacement Part

ALL99466...... Door Bar for Civic

ALL22114 Door Bar for Neon and Focus

Mini Stock Roll Cage Kit For Ford Escort ALL22104

Designed with safety in mind for mini enduro and four cylinder classes. Universal design is built for two or four door 1991-2002 Ford Escort bodies. Kit is constructed of .095" wall 1-3/4" mild steel tubing and includes a main hoop, halo, windshield posts, front and rear dash bars, three door bars for the left side, and a Z-bar for

the right side. Also included are two lengths of 1-3/4" tubing to weld to the factory pinch welds and two lengths of 1-1/2" tubing to connect the two sides, creating a

solid foundation for the cage and seat mount.

Replacement Part

ALL22113 Door Bar



Matthew Sprague

Kit Shown Assembled



Deluxe Roll Cage Kits

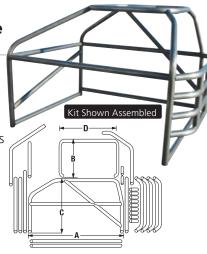
Kits include all pieces to assemble a Deluxe Roll Cage. Main hoop is fitted and tack welded together allowing for changes or custom seat mounts. Curved windshield posts fit closer to windshield pillar to increase driver visibility. Halo is curved and gusseted into the main hoop for maximum width, driver clearance and support. Mild 1-3/4" x .095" wall steel tubing is Kit Shown Assembled notched and has uniform bends. Other features include four curved and one straight driver's side door bars, "Z" type right side door bars, additional lower cross bar added to main hoop for added side support and assist in seat mounting, and a center halo support. ("A", "B",

"C" and "D" measurements are outside-to-ou	side.)	
--	--------	--

Part No.	Description	"A"	"B"	"C"	"D"
ALL22100	'78-88 GM Metric Chassis (Monte Carlo, Regal, Etc.) '70-81 Camaro/Firebird		28"	41"	44"
ALL22102	'70-77 Monte Carlo, Chevelle, Malibu, Etc.		28"	41"	44"
ALL22105	05 '77-90 Caprice/Impala		28"	41"	47"
ALL22106	'79-93 Mini Stock Mustang		28"	40"	42"

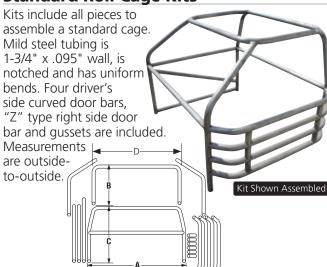
Offset Deluxe Roll Cage Kit

Ideal for use with template style or ABC bodies. Perimeter frame mount roll cage has the same features as other Allstar deluxe kits but includes an offset main hoop and a narrow halo for cars with an offset body or narrow roof.



Part No.	Description		"B"	"C"	"D"
ALL22109	Offset Kit 54" Wide Frame	54"	28"	41"	31"
ALL22099	Offset Kit 57" Wide Frame	57"	28"	41"	35"

Standard Roll Cage Kits

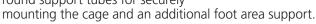


Part No.			"B"	"C"	"D"
ALL22101	'78-88 GM Metric Chassis (Monte Carlo, Regal, Etc.) '70-81 Camaro/Firebird	54"	28"	41"	42"
ALL22103	'70-77 Monte Carlo, Chevelle, Malibu, Etc.	55"	28"	41"	44"
ALL22107	Mini Stock Universal	49"	28.5"	47"	39"

Mini Stock Roll Cage Installation Kit

ALL22650

Universal installation kit for mini stock or front wheel drive cars provides a solid base or foundation to mount a roll cage. Kit includes two 60" long 2" x 2" square outside rails, two 54" long 1-3/4" round support tubes for securely



Right Hand Jack Post Kit ALL22111

Bolt-on kit fits most Howe. Port City, Lefthander, Finish Line and other offset chassis requiring a jack post to raise vehicle. Includes an assembled bar loop with lift post and pre-cut mounting bars to be welded in place. The mounting bars then bolt to chassis tabs (not included) for removal and installation.

Door Bar Components For Rocket Dirt Late Models

ALL22390/22391 three-point door bar mounts are constructed of 1" steel tubing and bolt to the frame. Each mount has a pre-welded sleeve sized to accept posts of the ALL22392 steel door bar.

ALL22391 Rear Door Bar Mount



Door Bar Clamp ALL14198

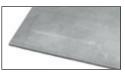
Clamp fastens around a 1-1/2" door bar, allowing a steel door plate to be mounted to the outside of the door bar area. Clamp eliminates the need to weld mounting tabs or door plate directly to a finished chassis. Sold each and includes 1/2" mounting hardware.





Steel Plate

Steel plate is useful for many building projects or fabricating brackets. 10 gauge (1/8" thick) mild Steel plate is ideal for adding a protective cover to the driver's side floor or door bar area of circle track cars.

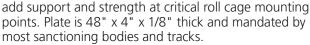


ALL54070 18" x 26" **ALL54071** 24" x 24" **ALL54072** 24" x 36"

Door Plate ALL22118

Plates can be welded between the driver's side door bars. May

also be used to box "C"-type frame rails to



Curved Door Bar ALL22114

Curved door bar is constructed of 1-3/4" O.D. x .095"



wall mild steel tubing and is the same door bar included in Allstar's Standard and Deluxe roll cage kits. Bar is notched to fit between two vertical posts spaced 43" on center and adds approximately 6" to the width of the cage.

Door Bar Spacers

Spacers fit between two door bars for added support and to equally space door bars apart. Constructed of 1-3/4" O.D. x .095" wall mild steel tubing.

ALL22115 4" Spacer, spaces door bars 3" apart. (These bars are included in Allstar Standard and Economy Roll Cage Kits)

ALL22116 5" Spacer, spaces door bars 4" apart. (These bars are included in Allstar Mini Enduro

These bars are included in Allstar Mini E Kits)

Swing Out Door Bar Kit ALL22670

Kit includes hardware and mounting brackets



needed when installing a swing out style door bar on roll bar equipped car. Kit includes mild steel brackets, spacers, quick release T-handle pin and mounting hardware.

Steering Column Brackets

Stamped-steel brackets weld to dash bars to create a mounting point for steering shaft when using a 3/4" oversized rod end. Brackets are 3-1/8" wide and available in a variety of lengths to fit most applications. 4" and longer brackets are prenotched for 1-1/2" dash bars but are easily modified to fit other size bars.

ALL52120 2-1/2" Long **ALL52122** 4" Long **ALL52124** 8" Long **ALL52126** 10" Long

Steering Shaft Rod End Mounting Tab

Gusseted weld-on tab provides an excellent mounting point for the 3/4" oversized rod end (ALL52132) when building custom steering shaft assemblies. Tab is designed to cradle into round chassis tubing with built-in gussets adding strength and reducing flex.



ALL52133

ALL52132 Oversized 3/4" Rod End Kit

Steering Quickener Bracket ALL60028

Mounts all popular steering quickeners including AFCO, Coleman, Howe and others. Bracket has two holes, spaced 1-3/4" apart, and may be welded to 1-1/2" or 1-3/4" diameter tubing.

Floor Pedal Plate ALL54050

Weld-in pedal plate is 23" x 5" x 1/8" and speeds up



race car construction by providing the proper spacing for mounting pedal/master cylinder assemblies.

Hanging Brake Pedal Mount ALL54060

Welds to chassis to mount Wilwood and Tilton style hanging pedals. Notched to clear balance bar.



Bernie VanderPloeg



Universal Seat Mount Kit

ALL22110

1-1/2" diameter x .095" wall mild steel tubing attaches to roll cage, to safely and effectively mount a seat. Use with Allstar roll cage kits. Kit is sold unassembled and requires welding.

Seat Mount Brackets

Made from 1/8" thick mild steel. Upper bracket is angled to fit against the back of most aluminum racing seats. Two-piece design allows front-to-back and side-to-side adjustment. Upper mount brackets may be bolted or welded. Lower mount welds to 1-1/2" or 1-3/4" tubing.

ALL60032 Upper, 2-Piece **ALL60033** Lower

Double Shear Seat Belt Tab ALL60031

Bracket welds to chassis for solid seat belt mount to the chassis, yet still able to pivot. Double shear design provides twice the strength of a single tab style mount. Steel bracket accepts 1/2" hardware.

1

Narrow Front Arch Support ALL22645

Arch supports replace the front arches found on many asphalt late models and modifieds or when fabricating a new chassis. Narrow triangular design arches are constructed of 1-3/4" x .095" wall, D.O.M. steel tubing, are 30" wide at the mounting points and 17" tall, but may be trimmed to fit many applications. Sold as a pair*

*LH support features a small kick out for added header clearance.

Front Arch Support ALL22119

Arch supports are required when installing Allstar front support kits. They add strength to suspension mounting area and create mounting points for shock brackets. Arches are constructed of 1-3/4" x .095" wall mild steel tubing, 24" wide at the mounting points and 16" tall but may be trimmed to fit many applications. Sold each.



Taylor Imus

Universal Front Hoop

ALL22108

Front support kit adds strength to the front section of race car by reducing excessive flex. Pre-cut and notched pieces of 1-3/4" x .095" wall mild steel tubing fasten to the existing roll cage and extend to the front of the chassis to strengthen vulnerable steering and radiator areas. Lower radiator mounting brackets are included. Kit requires the addition of two front arch sup-



ports (ALL22119) sold separately to complete installation. Some modifications may be required for installation.

Universal Mini Stock Front Hoops

Universal front hoops come in 3 widths to fit a variety of mini stock chassis. Mild steel tubing is 1-1/2" x .083".



Part No.	Outside Width	Car Type
ALL22652	40-1/2"	Mid-Size
ALL22653	46-1/2"	Neon
ALL22654	51-1/4"	Big

Universal Rear Support

ALL22112

Rear support adds strength to the rear section of race car by reducing excessive flex. Kit includes pre-cut and notched pieces of 1-3/4" x .095" wall mild steel tubing which fasten to the existing roll cage and extend to the rear of the chassis. Some modifications may be required for installation.



Fuel Cell Guard ALL22374

Guard adds protec-

tion to the fuel cell and acts as a lifting point for rear of vehicle. Universal kit is constructed of 1-3/4", .095" wall, mild steel tubing. Parts are pre-cut and notched, ready to be welded together. Height is 8-3/4" and mounting width is 42".

Frame Repair Plate For Metric Chassis ALL60085

1/8" steel rear frame plate fits 1978-88 GM metric cars. Plate is cut to fit stock frames and measures 4-1/4" x 27".





120°

120°

90°

End View

End View I

Reinforced Aluminum Angle, 120°

Aluminum angle has many uses including strengthening body panels and providing a mounting point for strapping or body braces, typically used on the lower section of rear quarter panels and doors. The reinforced design adds additional strength over standard 120° angle with an extra bend which also allows easier access to body brace bolts. Angle allows supports or braces to angle upward toward the chassis. Angle is 1/8" thick x 1-1/2" wide and has predrilled 1/4" holes on

1" centers.

ALL23142-5....... 66" Long, 5-Pack End View L Aluminum Angle, 120°

Aluminum angle has many uses including strengthening body panels and providing a mounting point for strapping or body braces, typically used on the lower section of rear quarter panels. 120° angle allows supports or braces to angle upward toward the chassis.

Angle is 1/8" thick x 1" wide and has predrilled 1/4" holes on 1" centers.

ALL23130 26" Long **ALL23130-5**.. 26" Long, 5-Pack **ALL23131** 30" Long **ALL23131-5**.. 30" Long, 5-Pack **ALL23132** 66" Long **ALL23132-5**.. 66" Long, 5-Pack

Aluminum Angle, 90°

Aluminum angle has many uses including strengthening body panels and providing a mounting point for strapping or body braces, typically used on the upper section of rear quarter panels and door panels. 90° angle allows supports or braces to fasten directly to the chassis. Angle is 1/8" thick x 1" wide and has predrilled 1/4" holes on 1" centers.

ALL23134 26" Long **ALL23134-5**.. 26" Long, 5-Pack **ALL23135** 30" Long **ALL23135-5**.. 30" Long, 5-Pack **ALL23138** 66" Long **ALL23138-5**.. 66" Long, 5-Pack

Slotted Aluminum Angle, 90° ALL23124

Slotted angle aluminum brace connects and strengthens body panels. Brace is 1/8" thick x 1" W x 72" L with 3/8" x 5/8" slots. Ideal for use along tops of spoilers.



12 FT. AND LONGER LENGTHS FOR LOCAL PICKUP ONLY!

Aluminum Flat Stock

6063-T5 aluminum flat stock is ideal for fabricating mounting brackets, etc.

Description	4' Length	8' Length	12' Length	16' Length
Flat Stock 1'	' Wide			
1/8" Thick	ALL22250-4	ALL22250-8	ALL22250-12	ALL22250-16
3/16" Thick	ALL22251-4	ALL22251-8	ALL22251-12	ALL22251-16

Aluminum Angled Stock

1" x 1" 6063-T5 aluminum stock is ideal for fabricating mounting brackets, etc.

Description	4' Length	8' Length	16' Length
1" x 1" x 1/16" Thick	ALL22253-4	ALL22253-8	ALL22253-16
1" x 1" x 1/8" Thick	ALL22254-4	ALL22254-8	ALL22254-16
1" x 1" x 3/16" Thick	ALL22255-4	ALL22255-8	ALL22255-16

Aluminum Square And Rectangular Tubing

Tubing is 6063-T5 grade alloy with .125" wall thickness. Ideal for fabricating rub rails or building shop, trailer or pit equipment like ladders, pit carts and tire racks.

Description	4' Length	8' Length	12' Length	20' Length		
Square						
3/4" x 3/4"	ALL22256-4	ALL22256-8	ALL22256-12	ALL22256-20		
1" x 1"	ALL22257-4	ALL22257-8	ALL22257-12	ALL22257-20		
Rectangular	Rectangular					
1" x 2"	ALL22258-4	ALL22258-8	ALL22258-12	_		

Aluminum Round Tubing

Round 1-1/2" x .083" tubing is 6061-T6 grade alloy which is ideal for building bumpers.

ALL22085-4 . 4' Length **ALL22085-8** . 8' Length **ALL22085-12** 12' Length

Steel Flat Stock

Steel flat stock is ideal for building projects around the shop or creating supports when needed. Standard grade steel has excellent welding characteristics and is easily cut and shaped.

Description	4' Length	8' Length	12' Length
1" x 1/8"	ALL22150-4	ALL22150-8	ALL22150-12
1" x 3/16"	ALL22151-4	ALL22151-8	ALL22151-12
1-1/2" x 1/8"	ALL22152-4	ALL22152-8	ALL22152-12
2" x 1/8"	ALL22154-4	ALL22154-8	ALL22154-12
2" x 3/16"	ALL22155-4	ALL22155-8	ALL22155-12

Steel Angled Stock

Steel angled stock is ideal for building projects around the shop or creating supports when needed. Standard grade steel has excellent welding characteristics and is easily cut and shaped.

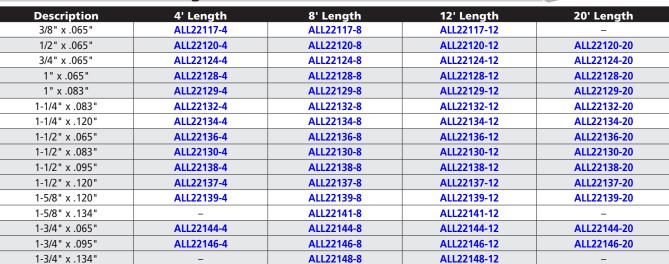
Description	4' Length	8' Length	12' Length
1" x 1" x 1/8"	ALL22156-4	ALL22156-8	ALL22156-12
1-1/2" x 1-1/2" x 1/8"	ALL22157-4	ALL22157-8	ALL22157-12
2" x 2" x 1/8"	ALL22158-4	ALL22158-8	ALL22158-12



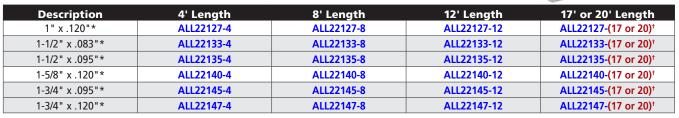
Mild Steel Tubing

Sold only in pre-cut lengths (4, 8, 12, or 20 ft.). Always check wall thickness tolerance before cutting or welding, especially if the car is to be certified. Tubing wall thickness will vary.

Round Mild Steel Tubing



Round D.O.M. Mild Steel Tubing



^{*}Tubing is drawn over mandrel (D.O.M.) and has tighter wall thickness tolerance.

Square Mild Steel Tubing

				-
Description	4' Length	8' Length	12' Length	20' Length
1/2" x .065"	ALL22160-4	ALL22160-8	ALL22160-12	ALL22160-20
3/4" x .049"	ALL22163-4	ALL22163-8	ALL22163-12	-
3/4" x .065"	ALL22164-4	ALL22164-8	ALL22164-12	ALL22164-20
1" x .083"	ALL22169-4	ALL22169-8	ALL22169-12	ALL22169-20
1-1/2" x .083"	ALL22175-4	ALL22175-8	ALL22175-12	ALL22175-20
2" x .083"	ALL22182-4	ALL22182-8	ALL22182-12	ALL22182-20

Rectangular Mild Steel (1018)

Description	4' Length	8' Length	12' Length	20' Length
1" x 2" x .120"	ALL22183-4	ALL22183-8	ALL22183-12	ALL22183-20
2" x 3" x .083"	ALL22184-4	ALL22184-8	ALL22184-12	ALL22184-20

12 FT. AND LONGER LENGTHS FOR LOCAL PICKUP ONLY!



tLength is determined by mill run. Call for availability.



Round Chrome Moly Steel Tubing (4130N)

Sold only in pre-cut lengths (4, 8, 12 ft., etc.). Always check wall thickness tolerance before cutting or welding, especially if the car is to be certified. Tubing wall thickness will vary.



Description	4' Length	8' Length	12' Length	17', 19' or 20' Length
1/4" x .035"	ALL22000-4	ALL22000-8	ALL22000-12	ALL22000-(17, 19 or 20) [†]
3/8" x .058"	ALL22005-4	ALL22005-8	ALL22005-12	ALL22005-(17, 19 or 20) [†]
1/2" x .049"	ALL22010-4	ALL22010-8	ALL22010-12	ALL22010-(17, 19 or 20) [†]
1/2" x .058"	ALL22012-4	ALL22012-8	ALL22012-12	ALL22012-(17, 19 or 20) [†]
5/8" x .049"	ALL22015-4	ALL22015-8	ALL22015-12	ALL22015-(17, 19 or 20) [†]
5/8" x .058"	ALL22017-4	ALL22017-8	ALL22017-12	ALL22017-(17, 19 or 20) [†]
3/4" x .049"	ALL22020-4	ALL22020-8	ALL22020-12	ALL22020-(17, 19 or 20) [†]
3/4" x .058"	ALL22022-4	ALL22022-8	ALL22022-12	ALL22022-(17, 19 or 20) [†]
3/4" x .095"	ALL22024-4	ALL22024-8	ALL22024-12	ALL22024-(17, 19 or 20) [†]
3/4" x .120"	ALL22026-4	ALL22026-8	ALL22026-12	ALL22026-(17, 19 or 20) [†]
7/8" x .058"	ALL22030-4	ALL22030-8	ALL22030-12	ALL22030-(17, 19 or 20) [†]
7/8" x .095"	ALL22032-4	ALL22032-8	ALL22032-12	ALL22032-(17, 19 or 20) [†]
1" x .049"	ALL22040-4	ALL22040-8	ALL22040-12	ALL22040-(17, 19 or 20) [†]
1" x .058"	ALL22042-4	ALL22042-8	ALL22042-12	ALL22042-(17, 19 or 20) [†]
1" x .065"	ALL22044-4	ALL22044-8	ALL22044-12	ALL22044-(17, 19 or 20) [†]
1" x .083"	ALL22045-4	ALL22045-8	ALL22045-12	ALL22045-(17, 19 or 20) [†]
1" x .095"	ALL22046-4	ALL22046-8	ALL22046-12	ALL22046-(17, 19 or 20) [†]
1-1/8" x .058"	ALL22050-4	ALL22050-8	ALL22050-12	ALL22050-(17, 19 or 20) [†]
1-1/8" x .083"	ALL22054-4	ALL22054-8	ALL22054-12	ALL22054-(17, 19 or 20) [†]
1-1/4" x .058"	ALL22060-4	ALL22060-8	ALL22060-12	ALL22060-(17, 19 or 20) [†]
1-1/4" x .065"	ALL22062-4	ALL22062-8	ALL22062-12	ALL22062-(17, 19 or 20) [†]
1-1/4" x .083"	ALL22061-4	ALL22061-8	ALL22061-12	ALL22061-(17, 19 or 20) [†]
1-1/4" x .095"	ALL22063-4	ALL22063-8	ALL22063-12	ALL22063-(17, 19 or 20) [†]
1-1/4" x .120"	ALL22064-4	ALL22064-8	ALL22064-12	ALL22064-(17, 19 or 20) [†]
1-3/8" x .058"	ALL22070-4	ALL22070-8	ALL22070-12	ALL22070-(17, 19 or 20) [†]
1-3/8" x .095"	ALL22072-4	ALL22072-8	ALL22072-12	ALL22072-(17, 19 or 20) [†]
1-1/2" x .049"	ALL22079-4	ALL22079-8	ALL22079-12	ALL22079-(17, 19 or 20) [†]
1-1/2" x .058"	ALL22080-4	ALL22080-8	ALL22080-12	ALL22080-(17, 19 or 20) [†]
1-1/2" x .065"	ALL22082-4	ALL22082-8	ALL22082-12	ALL22082-(17, 19 or 20) [†]
1-1/2" x .083"	ALL22084-4	ALL22084-8	ALL22084-12	ALL22084-(17, 19 or 20) [†]
1-1/2" x .095"	ALL22086-4	ALL22086-8	ALL22086-12	ALL22086-(17, 19 or 20) [†]
1-5/8" x .083"	ALL22090-4	ALL22090-8	ALL22090-12	ALL22090-(17, 19 or 20) [†]
1-3/4" x .083"	ALL22093-4	ALL22093-8	ALL22093-12	ALL22093-(17, 19 or 20) [†]

[†]Length is determined by mill run. Please call for availability.

Threaded Tubing Ends

Chrome moly 4130 steel tubing ends are ideal for building custom length suspension tubes. Available in RH and LH threads.





Thread Size	Tubing Size	Tube End Insert O.D.	RH Part No.	LH Part No.
10-32	3/8" x .058"	.259"	ALL22500	_
5/16"-24	1/2" x .058"	.384"	ALL22504	_
3/8"-24	5/8" x. 058"	.509"	ALL22508	ALL22509
3/8"-24	3/4" x .058"	.634"	ALL22512	ALL22513
1/2"-20	7/8" x .058"	.759"	ALL22518	ALL22519
1/2"-20	1" x .058"	.884"	ALL22522	ALL22523
1/2"-20	1" x .065"	.870"	ALL22526	ALL22527
1/2"-20	1-1/8" x .058"	1.00"	ALL22530	ALL22531
5/8"-18	1" x .058"	.884"	ALL22534	ALL22535
5/8"-18	1" x .095"	.810"	ALL22538	ALL22539
5/8"-18	1-1/4" x .095"	1.060"	ALL22542	ALL22543 [‡]
5/8"-18	1-1/4" x .120"	1.010"	ALL22546	ALL22547 [‡]
3/4"-16	1-1/4" x .065"	1.120"	ALL22548	ALL22549‡
3/4"-16	1-1/4" x .095"	1.060"	ALL22550	ALL22551‡
3/4"-16	1-1/4" x .120"	1.010"	ALL22554	ALL22555‡
3/4"-16	1-3/8" x .095"	1.185"	ALL22558	ALL22559*

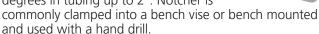
 $^{{\}tt +Tube}$ end has built-in hex for adjusting.

12 FT. AND LONGER LENGTHS FOR LOCAL PICKUP ONLY!



Tubing Notcher ALL10411

Notcher works with most standard hole saws to creates a notch on end of round tubing for properly attaching round tubing to round tubing, often used when building roll cages, bumpers or custom chassis. Notcher features an adjustable holding fixture which automatically centers tubing to create a notch from 90-45 degrees in tubing up to 2". Notcher is



Note: Hole saw used should be the size of tube accepting notched tube.

Replacement Part

ALL10402 5/8"-18 Thread Adapter
Note: Tubing notcher includes a 1/2"-20 arbor thread and 5/8"-18

Note: Tubing notcher includes a 1/2"-20 arbor thread and 5/8"-18 adapter. Most hole saws up to 1-1/8" diameter use 1/2"-20, larger hole saws use 5/8"-18 thread.

Hole Saw Set ALL10412

Use with tubing notchers. Does not include an arbor for a hand drill. Set includes one of each size: 3/4", 1", 1-1/8", 1-1/4", 1-1/2" 1-5/8" and 1-3/4". Hole saws up to 1-1/8" diameter use 1/2"-20 thread, larger hole saws use 5/8"-18

Individual Hole Saws

thread.

ALL10413 3/4"	ALL10417 1-1/2"
ALL10414 1"	ALL10418 1-5/8"
ALL10415 1-1/8"	ALL10419 1-3/4"
ALL10416 1-1/4"	

Note: Hole saws up to 1-1/8" diameter use 1/2"-20 thread, larger hole saws use 5/8"-18 thread.

Deburring Tool ALL11036

A fast and easy way to remove burrs from the edges of machined or cut metals. Five-piece kit includes handle, telescopic blade holder and three unique blades. Handle has built-in storage for blades. Blade holder adjusts from

ALL99328 Replacement Blades, 3-Pack

Digital Levels

1" to 5".

Digital level with magnetic base measures the angle of a single straight surface or the angle of a joint between two



ALL10742..... Compact Digital Level, 2" x 2" x 1" **ALL10744**..... Digital Level, 6" x 2.25" x 1.25"



Smart Tool ALL10113

Ensure that chassis tubing is level and plumb when building roll cages or checking driveshaft angles. Also works on trailing arms and suspen-



sion tubes when used with ALL10740 Smart Tool Tray. A "hold" button freezes and unfreezes readings which can be displayed as degrees, percentages, or in./ft. at the push of a button. Plus and minus signs indicate when pitch is more or less than that shown on the display. Pitch reads in 1/8 in./ft. increments. Tool emits an audible "beep" at level and plumb. The tool shuts off automatically if idle for more than six minutes. Powered by a standard 9 volt battery.

Level Base ALL10741

Level base simplifies notching and bending of round tubing and helps ensure accuracy. Base fastens to standard ballast or weight brackets and clamps to the tube as a reference point when creating parallel, perpendicular, or any angle of opposing notches or bends during fabrication. Base accepts most digital levels including ALL10113,



Digital scale and mounting bracket sold separately.

ALL10742 and ALL10744 or standard bubble levels.

Individual Mounting Brackets

ALL14192 1" ALL14193 1-1/4" ALL14194 1-3/8" ALL14195 1-1/2" ALL14196 1-5/8" ALL14197 1-3/4"



ALL1419

Weld-On Nuts

Weld these steel nuts into a predrilled hole to provide a strong and easy method of bolting brackets or accessories to chassis.

Nuts are often used when the back side of a fastener in not accessible and they allow quicker installation and/or removal of chassis components.

1/4"-20 Nut for 3/8" Hole

ALL18546	(5/16"	UHL),	4-Pack
ALL18546-25	(5/16"	UHL),	25-Pack
		_	

3/8"-16 Nut for 3/4" Hole

ALL18549	Short (3/8"	UHL), 4-Pack
ALL18549-25	. Short (3/8"	UHL), 25-Pack
ALL18550	Long (7/8"	UHL), 4-Pack
ALL18550-25	. Long (7/8"	UHL), 25-Pack

1/2"-13 Nut for 3/4" Hole

ALL18551	Short (3/8" UF	HL), 4-Pack
ALL18551-25	Short (3/8" UF	HL), 25-Pack
ALL18552	Long (7/8" UH	IL), 4-Pack
ALL18552-25	Lona (7/8" UH	L). 25-Pack



Flat Tabs

Mild steel flat tabs have a straight edge and can be welded to round tubing, square tubing or flat plate.

Part No.	Description	Quantity Per Pack	Thickness	Overall Height	Center Of Hole Height	Hole Diameter
ALL60004	1/8" Tab, 5/8" Hole	4	1/8"	2-5/16"	1-11/16"	5/8"
ALL60005	1/8" Tab, 1/2" Hole	4	1/8"	1-7/8"	1-5/16"	1/2"
ALL60006	3/16" Tab, 1/2" Hole	4	3/16"	1-7/8"	1-5/16"	1/2"
ALL60007	1/4" Tab, 3/8" Hole	4	1/4"	2"	1-3/8"	3/8"
ALL60008	1/4" Tab, 1/2" Hole	4	1/4"	2"	1-3/8"	1/2"
ALL60009	1/8" Tab, 1/4" Hole	4	1/8"	1-5/8"	1-1/4"	1/4"
ALL60012	1/8" Tab, 1/4" Hole	4	1/8"	1-7/16"	7/8"	1/4"
ALL60013	1/8" Tab, 3/8" Hole	4	1/8"	1-7/16"	7/8"	3/8"
ALL60018	3/16" Seat Tab	4	3/16"	1-1/2"	7/8"	1/2"
ALL60019	1/4" Seat Tab	4	1/4"	1-1/2"	7/8"	1/2"
ALL60020	Window Frame Tab	10	1/16"	1"	3/4"	3/16"
ALL60021	Window Frame Tab	10	1/16"	3/4"	1/2"	3/16"
ALL60022	Bumper Tab	4	1/8"	1-1/4"	15/16"	1/4"
ALL60076	Chassis Tab	4	1/8"	1-3/4"	1-3/16"	3/8"
ALL60030	Mounting Tab	4	.100"	1-1/4"	3/4"	5/8"
ALL60090	Mounting Tab	4	.100"	1-1/4"	3/4"	3/8"
ALL60091	Mounting Tab	4	.100"	1-1/4"	3/4"	7/16"
ALL60092	Mounting Tab	4	.100"	1-1/4"	3/4"	9/16"



Radius Tabs

Mild steel radius tabs have a contoured edge to fit various sizes of round tubing.

Part No.	Description	Quantity Per Pack	Thickness	Overall Height	Center Of Hole Height	Hole Dia.
ALL60000	3/16" Tab, No Hole	4	3/16"	2-3/8"	-	-
ALL60001	3/16" Tab, 3/8" Hole	4	3/16"	2-3/8"	1-3/4"	3/8"
ALL60002	3/16" Tab, 1/2" Hole	4	3/16"	2-3/8"	1-3/4"	1/2"
ALL60003	1/8" Tab, 1/4" Hole	4	1/8"	2"	15/16"	1/4"
ALL60010	1/8" Tab, 1/4" Hole	4	1/8"	1-1/8"	9/16"	1/4"
ALL60011	1/8" Tab, 3/8" Hole	4	1/8"	1-1/8"	9/16"	3/8"



Body Brace Tabs

Mild steel tabs have built-in gussets for added support. Choose tabs that mount parallel or perpendicular to tubing. Package of 4.

	or perpendicular to		Overall	Center Of	Hole
Part No.	Description	Thickness	Height	Hole Height	
ALL60014	Round Tube, 1/4" Hole	1/8"	1-1/2"	1"	1/4"
ALL60015	Round Tube, Slotted	1/8"	1-1/2"	7/8"	1/4" x 3/4"
ALL60016	Round Tube, 3/8" Hole	1/8"	1-3/4"	1-1/4"	3/8"
ALL60017	Round Tube, 1/2" Hole	1/8"	1-3/4"	1-1/4"	1/2"
ALL60041	Round Tube, 1/4" Hole	1/8"	1-3/4"	1-1/4"	1/4"
ALL60086	Round Tube, 1/4" Hole	.085"	1-7/16"	1-15/16"	1/4"
ALL60087	Round Tube, 1/4" Hole	1/8"	1-7/16"	1-15/16"	1/4"
ALL60024	Flat Mount, 3/8" Hole	.085"	1-9/16"	7/8"	3/8"
ALL60027	Flat Mount, 1/4" Hole	3/16"	1-9/16"	7/8"	1/4"



Universal Hood Pin Mount ALL60067

Universal bracket with 1/4" mounting holes can be bolted on or welded in place. Bracket accepts 1/2" hood pins to secure hood and deck lids along with many other uses. Constructed of .100" steel, bracket has a built-in reinforcing gusset for added strength.

Universal Chassis Bracket ALL60068

Universal gusseted bracket is 3/16" thick and welds on for many uses including engine and body mounts. Bracket is 2-1/4" wide x 3-1/4" long and has a 1/2" hole located 1" from the end of the bracket.

Universal Mounting Bracket ALL60072

Universal formed bracket is 1/8" thick and welds on for many uses, including a body mount when modifying or fabricating chassis or as a rear engine mount bracket when used with rear motor mounts. Bracket is 2-1/4"W x 6-1/2"L and may be drilled for a variety of uses.

Brake Line Adapter Mounting Tabs

Secure brake line adapters or bulkhead fittings, or use as a mounting tab for a variety of uses.

ALL60029......Bolt-On With 5/8" Hole, 2-Pack ALL60030.....Weld-On With 5/8" Hole, 4-Pack ALL60092.....Weld-On With 9/16" Hole, 4-Pack ALL60091.....Weld-On With 7/16" Hole, 4-Pack ALL60090Weld-On With 3/8" Hole, 4-Pack





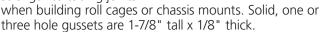
Tubing End Caps

Steel end caps weld to the end or inside of tubing to provide a clean look, prevent sharp exposed edges and seal tubes to keep out dirt and debris. Caps are commonly used on ends of bumpers, to fill existing holes in frames and as a flat gusset when butt joining sections of square or rectangular tubing. Package of 10.

Part No.	Description	Thickness			
Round End Caps					
ALL22280	7/8" O.D.	.125"			
ALL22285	1" O.D.	.125"			
ALL22281	1-1/4" O.D.	.125"			
ALL22286	1-3/8" O.D.	.125"			
ALL22282	1-1/2" O.D.	.125"			
ALL22283	1-5/8" O.D.	.125"			
ALL22287	1-11/16" O.D.	.125"			
ALL22284	1-3/4" O.D.	.125"			
Square End Caps					
ALL22290	1" x 1"	.085"			
ALL22291	1-1/2" x 1-1/2"	.085"			
ALL22292	2" x 2"	.085"			
Rectangle End Cap					
ALL22294	2" x 3"	.085"			

Gussets

Gussets add support and strength to tubing joints



Description	10-Pack	100-Pack
Solid	ALL22192	ALL22192-100
With One Hole	ALL22194	ALL22194-100
With Three Holes	ALL22196	ALL22196-100

Wrap Around Gussets

Gussets fit 1.50" to 1.75" tubing and can be used to join tubing from 70° to 110°. Wrap around gussets are 1/16" thick and provide more support and rigidity than a standard flat gusset.



ALL22199 10-Pack **ALL22199-50** 50-Pack

Rub Rail Flange ALL60023

Flanges are 3/16" thick and commonly used when building bolt-on style rub rails.

Center hole accepts 1-1/4" tubing and has two 3/8" mounting holes spaced 2-1/4" apart. Package of 4.

Charging Post Bracket ALL60064

Securely mount Allstar charging posts on vehicles where battery is not easily accessible. Predrilled holes allow quick mounting to frame or body. Double-D hole design positions posts close together, but provides enough room for charging or jumper cable clamps. Charging posts sold separately.

Remote Starter Button Shroud Kits

Kit mounts a remote starter button directly to chassis tubing. Kit includes a shroud to help protect against accidental activation, tab, and starter button.

ALL60360 Welded Kit ALL60361 Un-welded Kit

Battery Boxes

Universal, lightweight steel battery boxes may be welded or bolted to the frame. Boxes are available in two sizes and include hold do

able in two sizes and include hold down hardware.

ALL76100 12" Wide x 7-1/4" Deep **ALL76101** 10" Wide x 7-1/4" Deep

Replacement Components

ALL99175 J-Bolts with nuts 1pr ALL99177 Hold Down Strap for ALL76100

ALL99176 Hold Down Strap for ALL76101

Bolt-On Battery Boxes

Battery box has multiple 1/2" mounting holes to bolt box directly to the frame rail, inner fender or firewall. Box can also be fastened to round tubing using clamp-on ballast brackets. Constructed of 13 gauge steel, measures 11" wide x 7" deep and includes 3/8" battery hold down hardware.

ALL76102 Clear Zinc ALL76103 Black

Stainless Steel Drop-Out Battery Box ALL76105

The perfect battery box where battery mounts under floor. Eases battery service and replacement. Box is 10-1/2" wide, 7" deep, and 9-1/2" tall and will accept most standard batteries.

Ground Stud ALL76147

Steel ground stud welds to round tubing providing a secure location for mounting a negative battery cable. Weld stud directly to the chassis or create a secure ground wire location in the foot box or engine compartment. Stud accepts battery cables with 3/8" ring terminals.

Upper Coil-Over Shock Mount Kit

ALL60230

Weld-in kit provides a mounting point for rear coil-over shock mounts on tube, boxed or stock frames with up to 48" between



ALL60361

ALL76103

frame rails. Great for drag racing and street applications, kit includes a 48" long, .120" wall x 1-1/2" mild steel tube, reinforced mounting tabs, 2" x 3" end plates and 1/2" hardware.



Weld-On Shock Brackets

Weld-on shock brackets mount standard and coil-over shocks with 1/2" I.D. inner bushing or 1/2" rod end to chassis as well as many other uses. 1/8" thick mild steel brackets include 1/2" bolt, spacer and locknut.

Notched Tube Mount

Bracket is notched for 1-1/2" - 1-3/4" round tubing to create a gusset style mount that welds on three sides. Notched design positions the bracket perpendicular to the tubing at a 90° angle for straight mount and approximately a 75° angle for angled mounts.

Straight Mount



Angle Mount



ALL60100 Left Hand Single **ALL60101** Right Hand Single

Round Tube Mount

Bracket welds parallel onto tubing. Typically mounted above or below tubing and includes 1/2" shock mounting hardware. Mounting positions are on 1" centers.

ALL60107 Single ALL60114 Two Position ALL60115 Three Position



Flat Mount

Bracket mounts to a flat surface or square tubing.

ALL60106 Single

Related Parts

ALL99100 Replacement bolt, locknut, and bushing

ALL99101 Replacement bushing only

Clamp-On Shock Brackets

Clamp-on shock brackets mount standard and coil-over shocks with 1/2" I.D. inner bushings to round tubing without welding. Easily add additional mount or pivot



mount when experimenting or trying different set-ups. Standard brackets position the shock approximately 1" below the chassis tubing. Drop mount brackets position the shock approximately 2-1/2" below the chassis tubing. Brackets include mounting hardware with nyloc locking nuts.

Clamp-On

ALL60220 1.75" ALL60221 1.50" ALL60222 1.25" Drop Mount Clamp-On ALL60224 1.75" ALL60225 1.50"

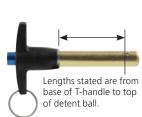
1/2" Rod End Mount ALL60073

3/16" thick steel mount with 1/2" holes accepts rod ends up to 5/8" wide. Mount is 1-5/8" tall overall.

Quick Release T-Handle Pins

Positive lock, quick release pins hold tightly in place until the handle button is depressed, allowing the pin to be

allowing the pin to be inserted into or removed from a hole with ease. Handles are made from 380 die cast aluminum, shanks are made from 4130 steel. Each pin is equipped with a stainless steel split ring, providing the option to attach a cable assembly.



ALL60300 1/4" x 1"	ALL60314 3/8" x 3"
ALL60301 1/4" x 1-1/2"	ALL60318 1/2" x 2"
ALL60302 1/4" x 2"	ALL60320 1/2" x 2-1/2"
ALL60304 5/16" x 1"	ALL60322 1/2" x 3"
ALL60306 5/16" x 2"	ALL60324 1/2" x 3-1/2"
ALL60308 5/16" x 3"	ALL60326 5/8" x 2"
ALL60310 3/8" x 1"	ALL60328 5/8" x 2-1/2"
ALL60312 3/8" x 2"	ALL60330 5/8" x 3"

Quick Pin Lock Collars

Steel lock collar provides a positive lock for quick release pins. Black coated collar with button head machine screw allows attachment of a securing device, like an Allstar lanyard (ALL18461 or ALL18463).

ALL60335 1/2" Collar With 10-32 Screw **ALL60336** 5/8" Collar With 1/4"-28 Screw



ALL60106



ALL56119

ALL56106

ALL56095

Tube Clamps

2-piece tube clamp bolts to round tubing and provides a removable welding point for many uses. Clamps are constructed of 1/8" mild steel that is

2" wide. Includes two 3/8" grade 8 bolts with nyloc nuts.

ALL14480 1" ALL14485 1-3/4" ALL14481 1-1/4" ALL14486 2"

ALL14483 1-1/2"

Coil Spring Spacer ALL56116

Spacer for 5" racing spring welds into spring pocket, enabling chassis adjustments on street stock and other race cars that are not allowed to use weight jack bolts or threaded adjusters. 3" tall spacer may be cut to desired height before installation. Use coil shim spacers ALL56120 and ALL56121 to make chassis adjustments.

Adjustable Coil Spring Spacers

Adjustable spacers for 5" racing springs weld into spring pockets, enabling chassis adjustments on street stock and other race cars that are not allowed to use weight jack bolts.

ALL56118 Steel Adjuster ALL56119...... Steel Sleeve With Alum. Adj. Nut

Coarse Thread Weight Jack Bolts

Weight jack bolts have 1"-8 threads for quick adjustment. Use with ALL56113, ALL56114 and ALL56115 style spring plates.

ALL56106 8" Steel **ALL56107** 11" Steel

Weight Jack Bolts With Internal Thread

Bolts have a 7/16"-20 internal thread on one end for use with bolt-on and swiveler spring cups. Coarse thread bolts have 1"-8 outer threads while fine thread bolts are 1-1/8"-12.

Coarse Thread 1"-8 With 3/4" Hex

ALL56094 4" Steel ALL56095 6" Steel ALL56066 8" Steel ALL56067 11" Steel

Fine Thread 1-1/8"-12 With 1/2" Square Drive

ALL56090..... 6" Aluminum ALL56091 8" Aluminum ALL56092 6" Steel ALL56093 8" Steel

Jam Nuts **For Jack Bolts**

Steel jam nuts for jack bolts.



ALL56068 ALL56110 ALL99052

ALL56068..... 1"-8 (Coarse) 1-1/8" Wrench ALL56110 1"-8 (Coarse) 1-1/2" Wrench **ALL99052** 1-1/8"-12 (Fine) 1-3/8" Wrench

Weight Jack Bolt Collars

Steel collar typically welds onto frame or chassis for installation of a threaded jack bolt. Collar includes grease fitting.

ALL56098..... 1-1/8"-12 **ALL56099**..... 1"-8

Weight Jack Bolt Sleeves

Weld-in mild steel sleeve provides a mounting point for jack bolts or adjustable shock mounts. Sleeves are 2" long and have a 1-3/8" O.D. for welding onto chassis tubing.

ALL56073 1-1/8"-12, Fine Thread ALL56109 1"-8, Coarse Thread

Coarse Thread Nut With Sleeve ALL56111

Steel coarse thread nut with sleeve has 1"-8 coarse threads.

Weight Jack Plate ALL56112

Heavy-duty steel plate has a threaded boss welded to the center to accept jack bolts with 1"-8 coarse threads. O.D. is 5".

Slotted Upper Control Arm Bracket Kit ALL60077

Kits contain (2) slotted brackets, (2) centered bushings, (2) reducer spacers for 5/8" rod end and a 1/2" bolt and nyloc nut. Offset aluminum bushings (sold separately) allow for plenty of adjustment options.

Insert Bushings

ALL60080	Centered Bushings (Pair)		
ALL60081	1/8" Offset Bushings (Pair)		
ALL60082	1/4" Offset Bushings (Pair)		
ALL60083	3/8" Offset Bushings (Pair)		
ALL60084	1/2" Offset Bushings (Pair)		

Upper Control Arm Brackets ALL60025

Stamped, 3/16" thick mild steel brackets weld to chassis to provide a mounting point for upper control arm. Brackets are sold in pairs and have two 5/8" mounting holes, spaced 7/8" apart for adjustment. May be trimmed to desired height.

Upper Control Arm Bracket

ALL60190

Bracket is flame cut from 1/2" thick steel, with 6" bolt spacing. Welds to frame and accepts upper A-arm.



















ALL56123



Front Strut Mounting Bracket

ALL60215

Designed for use with any stud mount coil-over strut, mounting brackets

attach to the front strut bars. Brackets are also flat for universal applications and may be bent to fit multiple configurations of tubes and angles on varying chassis options

Chassis Tie Down Brackets ALL60075

Steel brackets weld to chassis and provide a secure mounting location to hook a tie down strap or winch cable. Package of 2.



May be welded to chassis to support manual or automatic transmissions. Steel bracket is 1/8" thick with 1" x 7/16" slots for mounting bolts.

Driveshaft Loop ALL69000

Universal driveshaft loop contains the driveshaft if a voke or U-joint fails. Loop is 1/4" thick x 2" wide mild steel and fully adjustable to fit most cars.

Driveshaft Loop For 1979-2004 Mustangs ALL69006

Driveshaft safety loop bolts-on to help retain the front of the driveshaft in the event of a U-joint or other drivetrain component breakage. Black epoxy coated, all steel loop includes mounting hardware and complete instructions. Loop is designed to fit inside factory tunnel and work with most driveshafts up to 4" in diameter.

Unwelded Driveshaft Loop ALL69004

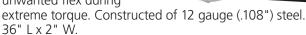
Made from 3/16" flat steel, loop is 9-1/2" tall, 5-1/2" wide with a 16" wide mounting strap that can be cut and welded for each installation.

180° Driveshaft Loop ALL69002

Pre-bent 1" diameter x .083" wall mild steel tubing is designed for chassis style cars to help retain the driveshaft in the event of a U-ioint failure. Loop is 10" tall overall and has a 5" I.D.

Ford 9" Truss Support ALL68330

Weld-on support adds strength to rear axle housing and reduces unwanted flex during



Leaf Spring Pad ALL56126

Steel pad welds to 3" diameter rear end axle tube when mounting rear end to most leaf springs. Pad is 2-1/2" W by 5-3/4" L and has a 5/8" center pilot hole. Sold each.

Lower Spring Cups

Steel spring cup has a 7" wide curved base that welds to the top of a 3" diameter rear end axle tube creating a flat mounting surface for a 5" O.D. racing springs. Commonly used to replace OE style "pigtail" lower spring mount. Sold each.

ALL56124 Standard Cup ALL56123 Lightweight Cup

Leaf Spring Slider Box ALL60034

Replace rear leaf spring shackles with Allstar's leaf spring slider box. Bolt-in slider box with roller bearing design eliminates leaf spring binding, freeing up car. Fits 2-1/2" wide Chrysler type leaf springs.

Replacement Parts ALL99055 Bushings

Leaf Spring Slider Box

ALL60035

Replace rear leaf spring shackles with Allstar's leaf spring slider box. Bolt-in slider box with roller bearing design eliminates leaf spring binding, freeing up car. Fits 2-1/2" wide Chrysler type leaf springs.

Adjustable Panhard Bar Mounting Bracket ALL60185

Bracket welds onto the rear of a 3" steel axle tube to mount a Panhard bar behind the axle housing. A machined 6" slot with a sliding retainer nut makes it possible to change roll center by adjusting Panhard bar angle with

only one wrench. Bracket includes a 3" x 3/4"-10 bolt, two 5/16" wide spacers and a flat washer.











Panhard Bar/Third Link **Brackets**

Brackets have a built-in arch for adjustment of the Panhard bar or third link angle without changing the length of the arm. Brackets are 1/8" thick. Sold as a pair.



ALL60163 6-Hole Brackets With 5/8" Holes

ALL60165 6-Hole Brackets With 3/4" Holes ALL60167 5-Hole Brackets With 3/4" Holes



ALL60162 ALL60167 ALL60163 ALL60165

ALL60079

Track Bar Locator Brackets

Track bar locator brackets are an ideal bolt-on mounting point for rod ends commonly found on Panhard bars. track bars or rear axle housing track locators. For use with 1/2" diameter rod ends. Available with a 5/8" or 3/4"bracket mounting hole.

ALL60079 5/8" Hole, 1" Gap ALL60089..... 3/4" Hole, 1-3/16" Gap

Trailing Arm Brackets

Steel brackets can be used as front mount for leaf spring or trailing arm. Assorted styles are available. Sold each.

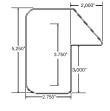
ALL60043

5/8" slot, 3/16" thick, 3-3/4" long.

ALL60044

3/4" slot, 3/16" thick, 3-3/4" long.

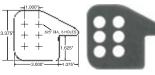










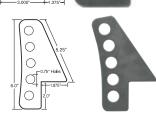


ALL60048

ALL60046

3/4" holes, 1/8" thick.

5/8" holes, 3/16" thick.



5/8" Rod End Reducer Spacers

Reducer spacers fit into 5/8" rod ends, reducing the hole size for 1/2" hardware while also spacing the rod end away from chassis brackets.





ALL18615

Standard spacers are 3/4" O.D. and flanged spacers have 1" O.D. flanges to help support rod end. Size referenced indicates the amount of space between rod end pivot ball and chassis bracket. Package of 2.

Standard Spacers

ALL18615..... Aluminum, 1/2" ALL18617 Aluminum, 1" ALL18618...... Aluminum, 1-1/4" ALL18619..... Aluminum, 1-3/4"



Flanged Spacers

ALL18611 Aluminum, 1/4" ALL18613 Aluminum, 1/2" ALL18610..... Steel, 1/4" ALL18612..... Steel, 1/2"



Tapered Spacers

Length	Steel	Aluminum
1/2" I.D.		
1/4"	ALL18570	ALL18590
3/8"	ALL18571	_
1/2"	ALL18572	ALL18592
3/4"	ALL18574	ALL18594
1"	ALL18576	ALL18596
5/8" I.D.		
1/4"	ALL18580	ALL18597
1/2"	ALL18582	ALL18598
3/4"	ALL18584	ALL18599
1"	ALL18586	_
3/4" I.D.		
1/2"	ALL18587	_
3/4"	ALL18588	_
1"	ALL18589	_



Trailing Arm Bracket ALL60042

Weld-on bracket has a curved 3/4" slot so rear end remains square as the trailing arm is raised or lowered. Notched for 2" x 3" square tubing, 1/4" thick.



Slider Boxes

Slider boxes weld to the chassis and provide an adjustable mount for trailing arms, Panhard bars and upper links. Boxes are constructed of .120" wall material and are 1-1/2" wide x 2-1/2" deep x 6" tall with a 4" slot that provides 3" of adjustment.





See Page 217 For Slider Box Accessories.



GM Metric Chassis Trailing Arms

New, stamped steel, C-channel arms are strong and sturdy. Improve handling of the rear suspension on 1978-88 GM Metric chassis by replacing twisted or worn out trailing arms. Sold each.

ALL57820 Upper, 2.6 Lbs. ALL57822 Lower, 3.6 Lbs.



ALL57824

ALL57826

Adjustable GM Metric Chassis **Trailing Arms**

Adjustable steel 1978-88 G-body Metric upper and lower rear end trailing arms are complete with left and right 3/4" rod ends, step spacers reducing to a 1/2" hole and cut to fit stock GM type

mounts. Upper arm aids in adjusting pinion angle and centering rear end. Lower arm will adjust wheel base.

ALL57824 Upper ALL57826 Lower **Replacement Parts**

ALL99320 Clevis End For ALL57824 ALL99321 Rod End Bushings, 2-Pack

GM Trailing Arm Rod End Reducer Bushings

Reducer bushings are used with spherical rod ends to take the place of the OE style trailing arm bushing (2-3/8" wide) when building custom or adjustable lower

trailing arms on popular GM cars. Bushing size listed is for size of rod end being used and both bushings accept 1/2" mounting hardware.

ALL18790 5/8" ALL18792..... 3/4"

Universal Trailing Arm Brackets

Brackets have three 1/2" mounting holes spaced 1-1/4" apart and may be welded to 3" axle tubes to provide

three trailing arm mount locations. ALL60058 is made of 3/16" steel and welds to the top of the rear end housing, providing a point of attachment for upper trailing arms.



ALL60051

ALL60058

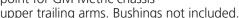
ALL60050 Lower Bracket

ALL60051 Shock Bracket For Lower

ALL60058..... Upper Bracket

Metric Upper Trailing Arm Mounts ALL60059

Mounts weld to the top of Ford 9" housing creating a mounting point for GM Metric chassis



GM Metric Chassis Trailing Arm Bracket Kits

Bracket kits include rear upper and lower trailing arm mounts that accept O.E. style bushings (included) and 1/2" hardware. Upper mount must be cut into two pieces (LH/ RH) and trimmed to desired height depending upon where housing is located in the chassis.



ALL60052 Kit With Single Hole Lower (Stock Location) ALL99282 Lower Brackets Only, (Stock Hole Location)

ALL60053..... Kit With Single Hole Lower, (1"Lowered) ALL99283 Lower Brackets Only, (1" Lowered Hole Location)

ALL60054..... Kit With Multi-Hole Lower (Stock to 4" Lowered) **ALL99284** Lower Brackets Only, (Multi-Hole)

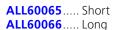
90/10 Shock Brackets

ALL60026

Brackets weld to the chassis to mount a shock between the chassis and the differential to control "unloading" during deceleration of hard braking. 1/8" thick steel brackets fit 1-1/2" diameter tubing and have four 1/2" holes, spaced 1" apart. One pair.

Upper Link Chassis Brackets

Weld-on brackets have curved 3/4" slots to maintain pinion angle as the 3rd link is raised or lowered. Both brackets are notched for 1-3/4" round tubing and are 3/16" thick.







Ford 9" Upper Link Brackets

Ford 9" housing brackets provide a mounting point for upper link. Weld-on brackets fit standard steel Ford housings.



ALL60160 1" Diameter Holes,

Sold In Pairs

ALL60166 3/4" Diameter Holes,

Set Of 2

Ford 9" Upper Link Brackets

ALL60157

Brackets are designed to weld to most Ford 9" style center sections. Steel brackets are 3/16" thick and provide multiple mounting locations for 90/10 shock, upper link, third link or pull bar. Sold as a set.



Wheelie Bar Wheel Bracket Kit ALL60500

Wheelie bar wheel brackets are a great start to building a custom set of wheelie bars featuring double shear strut mounting tabs with two 3/8" holes. Kit accepts wheelie bar wheels up to 1.625" w x 4" diameter with a 3/8" I.D. axle. Welding is required.



Half Clamp Brackets

Unique brackets are a must when clamping completely around tubing isn't possible. Bracket clamps just over halfway around tubing and tightens to create a secure mount for many accessories. 3" bracket can clamp to rear end axle tubes to neatly secure braided lines. Brackets have 3/8" mounting holes.

ALL10464 1-1/4" **ALL10468** 1-3/4" **ALL10470** 3"

Tube Clamps

2-piece tube clamp bolts to round tubing and provides a removable welding point for many uses. Clamps are constructed of 1/8" mild steel that is 2" wide. Includes two 3/8" grade 8 bolts with nyloc nuts.



Round Tank Brackets (Bottle Mounts)

Hinged brackets are uniquely designed to simplify tank installation and removal. Offered in a wide variety of sizes to fit many applications including NOS and fire bottles. Brackets are 1/2" wide and feature a flat bottom with 2.5" bolt spacing. Use in conjunction with chassis brackets (ALL14450-14459) when mounting to round chassis tubing.

Size	Polished	Black
2.00"	ALL14408	ALL14409
4.00"	ALL14414	ALL14415
4.25"	ALL14418	ALL14419
4.375"	ALL14422	ALL14423
5.25"	ALL14430	ALL14431
6.90"	ALL14436	ALL14437



Neck Mount Brackets

Two-piece aluminum bottle mounting brackets are designed for 1.525" diameter necks and accept ALL14450-14459 chassis brackets. Brackets are 1/2" wide.

ALL14474..... Polished Bracket ALL14475..... Black Bracket



Chassis Brackets (Base Mounts)

2-piece brackets clamp to chassis tubing and accept round tank brackets (ALL14402-14431) to complete your mounting needs. 2.5" bolt spacing. Mounting base is 1/2" wide.

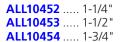
Size	Polished	Black
1.00"	ALL14450	ALL14451
1.25"	ALL14452	ALL14453
1.50"	ALL14454	ALL14455
1.625"	ALL14456	ALL14457
1.725"	ALL14458	ALL14459



ALL10452

Universal Brackets

Universal 1/4" thick aluminum brackets may be drilled and tapped to custom mount just about anything.



ALL10445 Reducer Bushing 1-3/4" to 1-5/8"





Accessory Clamps

Aluminum two-piece clamps are ideal for mounting small parts and accessories or creating an adjustable clamp-



ALL10456 on mount for supporting body or roof panels. Clamps are 1/2" wide and include two 1/4" button head fasteners.

Size	With 1/4"-20 Mount	With 1/4"-20 Mount And A 1/4" Through Hole
1"	ALL10455	ALL10485
1-1/4"	ALL10456	ALL10486
1-3/8"	ALL10457	ALL10487
1-1/2"	ALL10458	ALL10488
1-5/8"	ALL10460	ALL10489
1-3/4"	ALL10459	ALL10490

Ballast

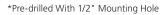
Add weight where it's needed. Sizes listed are approximate.

ALL14176...... 2.5 Lb. 3-1/2" Round x 3/4" Tall*

ALL14177 5 Lb. 3-1/2 Round x 1-3/8 Tall*

ALL14180..... 25 Lb. 4" x 8" x 2"

ALL14179..... 30 Lb. 2-1/2" x 2-1/2" x 12" **ALL14182**..... 40 Lb. 12" x 3-1/2" x 2-3/4"





ALI 14180

ALL14177

Clamp-On 10 LB. Ballast

ALL14205

Designed for safely adding weight to small tube chassis found on mini wedges, mini sprints or jr dragsters. Clamp-on design is formed of two halves which bolt together around 1" to 1-1/4" round tubing. Mounting hardware included.



Clamp-On 25 Lb. Ballast **ALL14181**

Securely add weight where it's needed. Clamp-on design is formed of two halves which bolt together around 1" to 1-3/4" round tubing, allowing easy installation and removal. Bolts are included for use on tubing up to 1-5/8". When clamping to 1-3/4" tubing, longer bolts (not included) are required.

Scale Buddy ALL13115

The Scale Buddy is a water filled bladder that may be placed directly into the seat of the car to represent the weight of the driver when setting up and scaling your racecar. Bladder may be filled and emptied in the car using a standard garden hose and weighs up to 100lbs when filled.

Note: Designed for set-up purposes only. not designed to be used as ballast during racing.



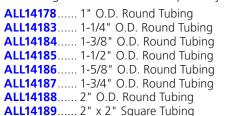
Economy Ballast Brackets

Black anodized two-piece aluminum bracket clamps around tubing with 5/16" hex head fasteners and has a 1/2"-13 tapped hole on each side. Mounting stud and nut sold separately.

	. 1" O.D. Round Tubing		
ALL14193	1-1/4" O.D. Round Tubing		
ALL14194	1-3/8" O.D. Round Tubing		
ALL14195	1-1/2" O.D. Round Tubing		
ALL14196	1-5/8" O.D. Round Tubing		
ALL14197	1-3/4" O.D. Round Tubing		

Ballast Brackets

Black anodized two-piece aluminum bracket clamps around tubing with recessed 5/16" socket head fasteners and has a 1/2"-13 tapped hole on each side. Mounting stud and nut sold separately.



Threaded Stud And Lock Nut For Mounting Ballast ALL14190

1/2"-13 x 6" threaded rod is often used with clamp-on ballast brackets when mounting ballast or may be used to bolt ballast directly to frame or chassis. Threaded rod may be cut to desired length and includes a nylon lock nut and flat washer.

Fuel Cell Mounting Bracket ALL60063

Steel bracket is radiused to fit 1-1/2" tubing and has (8) 3/8" holes on 1/2" centers. Bracket is .085" thick and 1-1/2" wide x 4-3/4" tall.

Fuel Cell Mounting Brackets

Steel brackets are .125" thick, 1-3/4" wide and available in three lengths. All have 3/8 holes.

ALL60060..... 2" Long ALL60061 3" Long ALL60062 4-3/4" Long

Fuel Cell Guard **ALL22374**

Guard adds protec-

tion to the fuel cell and acts as a lifting point for rear of vehicle. Universal kit is constructed of 1-3/4" x .095" wall, mild steel tubing. Parts are pre-cut and notched, ready to be welded together. Height is 8-3/4" and mounting width is 42".



ALL14195





Oil Eater Degreaser

The cleaner/degreaser that really works! We can't say enough about this cleaner; it can be used as a pre-wash on greasy clothing, to clean engine components, transmission cases and engine compartments, and is even strong enough to clean the shop and trailer floors! You won't



ALL78211 ALL782

be disappointed! Cleaner is non-toxic, non-corrosive and biodegradable so it is safe for the environment.

ALL78213 32 oz. Spray Bottle ALL78211 1 Gallon Container

Air Filter Cleaner ALL78222

Spray solution directly onto dirty air filter. Allow a brief time to soak, 5-10 minutes then rinse clean with water. For use with Allstar washable air filter elements. Plastic 24 oz. bottle.



Filter cleaning station simplifies and speeds up the process of servicing 14" washable air filters. Spray air filter with a cleaner/ degreaser as recommended by filter manufacturer. Allow a brief time to soak and then flush clean with a garden hose. Allow filter to dry completely then apply an even application of filter oil, if applicable. For use with washable filter elements only.

Dirt Tire Soap ALL78236

Clean your tires like the Pro's! Simply mix with water and spray on your tires before washing them, and the mud almost falls off. Cleaner also works for pre-treating your chassis and body before cleaning to help loosen dirt and clay. 1-gallon container.

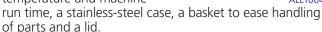




Donny Schatz

Ultrasonic Cleaners

Cleaners use high frequency sound waves to create a cavitation bubbles to gently deep clean. Cleaner features a digital display to regulate cleaning fluid temperature and machine



ALL10640 Small Cleaner - 1 Gallon Capacity, Unit is 13" L x 7" W x 11" H, Basket is 10" L x 5" W x 4" H, Tank depth is 5"

ALL10642 Large Cleaner - 5 Gallon Capacity, Unit is 21" L x 13" W x 14" H, Basket is 19" L x 10"W x 5" H, Tank depth is 7-1/2"

ALL10644 Cleaner Solution 1-Gallon

Mud-X Cleaner ALL78232

Cleans and shines plastic, polycarbonate, chrome, fiberglass, paint, vinyl and leather and leaves an invisible coating that protects surfaces and repels dirt, dust, fingerprints, smudges and bugs. Spray it on and wipe it off. Excellent anti-fog coating for helmet shields. 14 oz. can.

Mud-X Concentrate ALL78230

Mix concentrate with up to ten quarts of water to produce a coating that prevents mud, dirt, oil, rubber and exhaust residue from sticking to body panels. Safe for metal, plastic, rubber, and painted surfaces. One quart container.

Pressurized Sprayers

Sprayers are great for applying bulk cleaners, degreasers, solvents, penetrating oils and other lubricants. Sprayer has a capacity of 32 ounces and includes a versatile nozzle adjustable from mist to a fine stream.

ALL10516...... Black **ALL10518**...... Chrome

Pre-Race Dirt Solution ALL78234

Spray directly on the body and underside of your car before entering the racetrack. Helps prevent dirt, oil and rubber from sticking to the frame and body panels. Use direct without water. Half gallon container.







Plexus Cleaner ALL78200

Plexus cleaner is formulated to clean and protect clear and colored plastics. Unlike conventional waxes, Plexus cleans as it polishes and actually seals the pores of plastic, making small scratches less visible. Dries without streaks or smears.

Excellent for polycarbonate windows on race cars. 13 oz. can.



Novus Plastic Cleaner And Polish

Novus plastic polish will restore the finish of plastics, including polycarbonate windows and windshields. Offered in three formulas.

Cleaner 1 - ALL78201

Gently cleans all plastics without scratching. Leaves a lustrous shine that resists fogging, repels dust, and eliminates static. 8 oz. spray bottle.



Polish 2 - ALL78202

Removes fine scratches, haziness, and abrasions from most plastics. With repeated use, polish 2 will restore faded and discolored plastics. 8 oz. squeeze bottle.



Polish 3 – ALL78203

Removes heavy scratches and abrasions from most acrylic surfaces. Requires both #1 and #2 polishes for final finishing. 8 oz. squeeze bottle.



Dial-In Window Marker

ALL78205

Easy on, easy off white marker works well on glass and plastic. 3 oz. bottle has a built-in felt applicator.



Multi-Purpose Absorbent ALL12035

Organic material is a dust free alternative when cleaning up spills. Sprinkle product on spills and sweep up. 5 lb. resealable bag.



Cleaning Wipes

Disposable wipes are great for cleaning hands when washing is not an option. Perfect for use after fueling vehicles, making roadside repairs or even as a preclean to remove stubborn grease. Durable textured wipes are pre-moistened, citrus scented and enriched with aloe and vitamin E to deep clean and promote soft skin. Resealable package prevents product from drying out.



ALL12016...... 30 Ct. Pop-Up Dispenser **ALL12017**...... 60 Ct. Pop-Up Dispenser

Scott Rags ALL12005

Multi-purpose cloth-like disposable towels are perfect for shop and trailer. 10" x 12" towels are packaged in a 200 ct. box with pop-up dispenser. Mount to shop or trailer wall with ALL12220 holder.



Shop towels are much heavier than standard paper towels and work great for numerous tasks around the shop or track. Rolls contain 60 individually perforated 11" x 9-1/2" disposable sheets.



Soft, absorbent terry cloth towels can be used for polishing, wiping up spills or general detailing. Shop towels belong in every tool box as well as in the shop, garage or trailer.

ALL12010...... Red Shop Towels, 25-Pack ALL12011..... White Shop Towels, 25-Pack ALL12012..... White Terry Towels, 12-Pack



12" x 12" terry microfiber towels are great for polishing, cleaning and many other uses around the shop or when detailing a vehicle.

Different color towels keep jobs separated and help eliminate cross contamination between various polishes or cleaners. Package of 3.

Allstar Apron ALL99962

Black cloth apron has pockets to keep tools close at hand. Reverse apron to place pockets on the inside when grinding tires. Adjustable strap allows one size to fit all.





Competitive Edge Tire Conditioner

Chemically treats and softens race tires to increase traction without making tires greasy. Apply race day or night before on new or old tires, can be used on the inside or outside. One gallon container treats 4 to 6 tires.

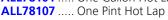




Hot Lap Tire Softener

Increase tire life by 20% over other softeners and reduce lap times by 2-3 tenths. Hot Lap relies on a special formula and will provide instant results. Formulated to pass tire "sniffer" tests.

ALL78101 One Gallon Hot Lap, Quick For 200 Laps



Track Claw Tire Strengthener

Strengthens the rubber and will work on all tires. Undetectable. Reduces lap times 0.2 to 0.3 seconds. One gallon container.

ALL78110 180°-220°F Tire Temps ALL78111..... Up To 150°F Tire Temps

Tire Prep Stand ALL10555

Steel tire prep stand is a must when grooving, siping, grinding or even cleaning tires. Bolts together, and the pivoting head eases initial tire mount. A locking T-handle secures the head assembly. Can be used with 5x5 or Wide 5 wheels.



Castrol SRF Brake Fluid

ALL78115

Castrol SRF Brake Fluid has a wet boiling point of 518°F (270°C) which exceeds DOT 3 and 4 standards. Do not mix Castrol SRF and other brake fluids, as this will reduce the benefits of Castrol SRF. Sold in 1 liter containers (33.8 ozs.)

AP Radi-CAL R2 (Super 600) **Hi-Temp Racing Brake Fluid**

ALL78108

Designed for extreme, high temperature racing conditions with a dry boiling point of 594°F and a wet boiling point of 383°F. Conforms to DOT 4 specifications. Sold in 16.9 oz. bottle.



AP Radi-CAL R3 (AP PRF) **Brake Fluid ALL78116**

Developed for extreme, high temperature racing conditions with a typical dry boiling point of 617°F and a wet boiling point of 383°F. Conforms to DOT 4 specifications. Sold in 16.9 oz. bottle.



Motul 600 Brake Fluid

ALL78117

100% synthetic brake fluid has an extremely high boiling point, helping to prevent vapor lock and brake fade during hard use. Motul 600 exceeds DOT 3 and DOT 4 specifications. Dry boiling point 594°F, wet boiling point 421°F. Sold in 16.9 oz. bottle.



Motul 660 Brake Fluid

ALL78118

100% synthetic brake fluid is specifically designed to resist extreme temperatures generated by racing carbon and ceramic brakes. Motul 660 exceeds DOT 3, DOT 4 and DOT 5.1 specifications. Dry boiling point 617°F, wet boiling point 401°F. Sold in 16.9 oz. bottle.



Nitrile Gloves

Nitrile gloves protect against dirt and grime and help prevent oil and harsh chemicals from contacting the skin. Chemical resistant gloves work well for general purpose

as well as jobs that involve oil, fuel, brake fluid and most cleaning chemicals such as brake and carb cleaners. Package of 100.

ALL12024 Medium **ALL12025**..... Large **ALL12026** X-Large **ALL12027**..... XX-Large



PERFORMANCE

ALL11017

TA-BIL

OGGING

Brake Bleeder Bottles

Contain the mess of bleeding brakes by capturing fluid in this 16 oz. bottle with a 15" long hose which attaches to most bleeder screws. The removable cap has a built-in fitting to secure the hose during storage to help prevent spills. Choose from a steel lanyard retainer that suspends the bottle from a chassis or suspension ALL11019 ALL11018

component, or a magnet retainer to secure the bottle to a steel object such as a brake drum or rotor during bleeding. ALL11017 has a magnet retainer and a built-in one way check valve for one person brake bleeding.

ALL11019 Bottle With Lanyard **ALL11018**..... Bottle With Magnet

ALL11017 Bottle With Magnet And Check Valve

ALL99435 Replacement Hose



Spray aerosol lubricant (with special additives) into the intake and spark plug holes to coat and lubricate the cylinders, valves and valve seats. Prevents horsepower-robbing corrosion and eliminates scuffing at start-up after periods of storage. May be used in all 2- or 4-cycle carbureted or fuel injected gasoline engines in cars, trucks, motorhomes, ATV's, etc. Sold in a 12 oz. can.

Extreme Pressure Lube ALL78246

Originally used throughout the tool and die industry,

this lube provides superior durability and wear protection taking the place of anti-seize in many applications. Recommended for spline-to-spline contact, threaded adjusters and engine fasteners. 4 oz. tube.



In Memory of Jim Overmyer

Air Filter Cleaner ALL78222

Spray solution directly onto dirty air filter. Allow 5-10 minutes to soak, then rinse clean with water. For use with Allstar washable air filter elements. 24 oz. plastic bottle.



Filter Cleaning Station ALL26009

Filter cleaning station simplifies and speeds up the process of servicing 14" washable air filters. Spray air filter with a cleaner/ degreaser as recommended by filter manufacturer, allow a brief time to soak then flush clean with a garden hose. Allow filter to dry completely then apply an even application of filter oil, if applicable. For use with wash-

Fuel Fragrances

able filter elements only.

Fuel fragrances can be added to most types of fuels including methanol, nitromethane, gasoline and also may be used in 2-cycle mixtures.



Available in many scents in a resealable 4 oz. bottle - enough to treat 30-55 gallons of alcohol or 20 gallons of gasoline. Mixes clear with fuel.

ALL78123 Cinnamon **ALL78124** Cherry ALL78125 Blueberry **ALL78126** Grape **ALL78127** Banana ALL78128 Fruit Punch ALL78129 Pina Colada ALL78130 Root Beer ALL78131 Bubble Gum

ALL78132 Cotton Candy ALL78133 Raspberry ALL78134 Tangerine ALL78135 Reefer Madness ALL78136 Vanilla ALL78137 Green Apple ALL78138 Strawberry ALL78139 Watermelon

Upper Lube Fuel Additive

Upper Lube is a high temperature cylinder lube that protects and extends engine life. Added directly to the fuel, Upper Lube reduces fuel wash down, chalky residue and corrosion, while lubricating cylinders,

valves, guides, and fuel system components. It mixes completely, won't separate from fuel,

leaves no varnish residue and does not contain a flame agent. One 16 oz. bottle treats 55 gallons of alcohol, 150 gallons of gasoline, or 110 gallons of ethanol.

ALL78100 Upper Lube

ALL78120 Upper Lube With Cherry Fragrance **ALL78122** Upper Lube With Grape Fragrance





Aluminum Tank Radiators

Excellent quality at an affordable price. Filler necks are machined, not stamped, and tanks are furnace brazed, not epoxied, eliminating two prime sources of leakage. The lightweight 1" tubes, arranged in two rows, offer outstanding cooling in race cars, off-road vehicles and street machines.

Single Pass

1-1/2" inlets and 1-3/4" outlets have beaded hose fittings.

	Core WxH	Overall
GM		
ALL30010	17" x 18"	22" x 19"
ALL30011	19" x 18"	24" x 19"
ALL30012	21" x 18"	26" x 19"
ALL30014	23" x 18"	28" x 19"
ALL30016	26" x 18"	31" x 19"
ALL30042	23" x 15"	28" x 16"
Ford		
ALL30020	17" x 18"	22" x 19"
ALL30021	19" x 18"	24" x 19"
ALL30022	21" x 18"	26" x 19"
ALL30024	23" x 18"	28" x 19"
ALL30026	26" x 18"	31" x 19"
ALL30043	23" x 15"	28" x 16"



ALL30022

TECH TIP

Radiators with aluminum tanks are recommended to use radiator caps rated at 28 lbs. or less.

Popular Radiator Caps For Aluminum Tank Radiators

ALL30128 Round 28-32psi Non-Recovery ALL30131 Round With Lever 21–25psi Recovery

ALL30128

Upper Mount Kit For Aluminum Tank Radiators ALL30121

Channel rests on top of the core and two flat aluminum straps may be bolted or welded to the channel. Hook the steel springs into provided hole and connect to a lower chassis location. Kit includes channel (2" x 21.5"), two straps (1" x 11.5") and two 17" springs. Fit Allstar aluminum tank radiators.

Replacement Parts

ALL30122 Spring ALL30123 Channel

Radiator Tie Down Rods

Aluminum tie down rods are often used with an upper radiator support to keep radiator in place. Rods have 3/8"-24 RH and LH threads. Often used with a rod end on one or both ends.

ALL54115 20" ALL54116 24" ALL54117..... 30"

Dual Pass

Dual pass radiators circulate coolant across the top half of the radiator, then back across the bottom half, allowing up to twice the heat dissipation. These radiators offer the same features as standard Allstar aluminum radiators including furnace brazed tanks, two rows of 1" ALL30035 tubes, billet machined filler neck with overflow, standard 1-3/4" outlet and feature a universal inlet design to accept fittings for a 1-1/2" standard hose, 1-3/4" hose, -16 or -20AN fittings (sold separately). Available in 24",

26", 28" and 31" overall widths (including tanks).

	Core WxH	Overall
ALL30033	19" x 18"	24" x 19"
ALL30035	21" x 18"	26" x 19"
ALL30036	23" x 18"	28" x 19"
ALL30037	26" x 18"	31" x 19"

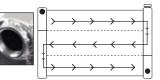


æ							
lг	\leftarrow			\leftarrow	\leftarrow	_ "	1
				_			
1	ļ						4
1							
	\rightarrow	\rightarrow	\rightarrow		-	\rightarrow	
ΙL	\rightarrow	\rightarrow	\rightarrow	>		\rightarrow	•

Triple Pass

Excellent quality at an affordable price. Filler necks are machined, not stamped, and tanks are furnacebrazed, not epoxied, eliminating two prime sources of leakage. The lightweight 1" tubes, arranged in two rows, offer outstanding cooling in race cars, off-road vehicles and street machines. Triple pass radiators circulate coolant across the top portion of the radiator, back across the mid-section and through the bottom allowing maximum heat dissipation. These radiators offer the same features as standard Allstar aluminum radiators including furnace brazed tanks, two rows of 1" tubes, billet machined filler neck with overflow, standard 1-3/4" outlet and a universal inlet designed to accept fittings for a 1-1/2" standard hose, 1-3/4" hose, -16 or -20AN fittings (sold separately). Available in 24", 26", 28" and 31" overall widths (including tanks).

	Core WxH	Overall
ALL30045	19" x 18"	24" x 19"
ALL30046	21" x 18"	26" x 19"
ALL30047	23" x 18"	28" x 19"
ALL30048	26" x 18"	31" x 19"



Radiator Inlet Fittings

Inlet fittings thread into Allstar dual and triple pass radiators offering different connection options for one radiator. Aluminum fittings have a o-ring seal and a built-in hex with a 1-5/8" -12 thread.

ALL30038 1-1/2" Hose Fitting ALL30041 1-3/4" Hose Fitting* **ALL30039** -16AN Fitting **ALL30040.....** -20AN Fitting



ALL30038

ALL30039 ALL30040

*Use with lower radiator hose as an upper hose

See Page 65 For A Complete Listing Of Radiator Caps.



Plastic Tank Radiators

Uniquely designed plastic tank radiators with aluminum core offer over a 22% gross weight savings to comparable aluminum tank radiators when filled with coolant. These performance radiators also provide 6% better cooling than aluminum tank radiators. Tanks are fastened to the core with multi-clamps and an o-ring gasket, a process similar in design to many of today's high performance late model muscle cars. Corrosion resistant tanks have molded

in 1-1/2" inlet and 1-3/4" beaded hose outlets. Widths are overall including tanks.

Single Pass

	Core WxH	Overall
GM		
ALL30050	17" x 18"	22" x 19"
ALL30051	19" x 18"	24" x 19"
ALL30053	23" x 18"	28" x 19"
ALL30054	26" x 18"	31" x 19"
Ford		
ALL30320	17" x 18"	22" x 19"
ALL30321	19" x 18"	24" x 19"
ALL30322	21" x 18"	26" x 19"
ALL30324	23" x 18"	28" x 19"
ALL30326	26" x 18"	31" x 19"



TECH TIP

Radiators with plastic tanks are recommended to use radiator caps rated at 25 lbs. or less.

Popular Radiator Caps For Plastic Tank Radiators

ALL30135 Round 21–25psi Non-Recovery ALL30137 Octagon 21–25psi Recovery

Upper Mount Kit For Plastic Tank Radiators ALL30152

Channel rests on top of the core and two flat aluminum straps may be bolted or welded to the channel. Hook the steel springs into provided hole and connect to a lower chassis location. Kit includes channel (1-1/2" x 21-1/2"), two straps (1" x 11-1/2") and two 17" springs.

Replacement Parts

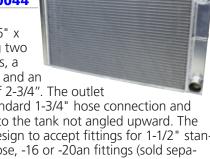
ALL30122 Spring ALL30153 Channel



Sheldon Haudenschild

Late Model Radiator ALL30044

Aluminum dual pass radiator measures 16" x 28" overall featuring two rows of 15/16" tubes, a core width of 2-1/4" and an overall tank width of 2-3/4". The outlet



is designed for a standard 1-3/4" hose connection and welded 90 degrees to the tank not angled upward. The inlet is a universal design to accept fittings for 1-1/2" standard hose, 1-3/4" hose, -16 or -20an fittings (sold separately). Radiator is designed for use with a surge tank, so it does not have a filler neck. A 1/4" petcock located near the top on the driver's side to release possible trapped air in the system when filling. T. Oak St.

Sprint Radiator ALL30028

Aluminum radiator with furnace brazed tanks provides superior cooling in sprint applications. Features machined filler neck, 1-1/2" RH bottom outlet and (4) female top outlet ports for use with -10AN O-ring fittings. Radiator uses a smaller

diameter cap (not included) such as ALL30124 or ALL30125. 20" wide x 22" tall x 2" wide. 9.7 lbs.

Sprint Cross Flow Radiator (Chassis Mount)

ALL30030

ALL30135

Aluminum radiator with a unique black thermal coating provides superior cooling! Built-in mounting brackets enable the radiator to be guick-turn fastened directly to frame tabs. Radiator with -10AN O-ring inlets and 1-1/2" outlet is 20-1/2" wide x 18-1/2" tall (including outlet neck) x 2-3/8" thick core. Recommended radiator cap is ALL30126 (28-32 lbs.) sold separately. Approximate weight 8.5 lbs.

Wall Mount Radiator Holder Kit ALL12216

Brackets fasten to trailer wall and hold radiator safely in place to avoid damage during transport. Kit includes two 29" long aluminum brackets with adjustment holes at 2" increments and arms to fit radiator cores up to 2-1/4" wide. Adjustable arms are slotted for quick adjustment with included thumbscrew knobs



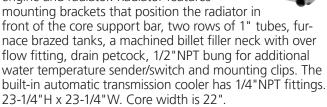


1955-56 Chevy Aluminum Radiator ALL30005

A direct replacement for all 1955-56
Chevy passenger cars with six cylinder engines, also ideal for 1955-57 Chevy V8's with long style water pumps.
Radiator has mounting brackets that position it in front of the core support bar, two rows of 1" tubes, furnace brazed tanks, a machined billet filler neck with over flow fitting, drain petcock, 1/2"NPT bung for additional temperature sender/switch and mounting clips. The built-in automatic transmission cooler has 1/4"NPT fittings. 23-1/4"H x 23-1/4"W. Core width is 22".

1957 Chevy Aluminum Radiator ALL30007

A direct replacement for all 1957 Chevy passenger cars with six cylinder engines, also ideal for V8's with long style water pumps that require additional space between engine and radiator. Radiator features



1955-57 Chevy Aluminum Radiator ALL30006

A direct replacement radiator for all 1955-57 Chevy passenger cars with a V8 engine using a short style water pump. Radiator has mounting brackets that position it behind the core support bar, two rows of 1" tubes, furnace brazed tanks, a machined billet filler neck with overflow fitting, drain petcock, 1/2"NPT bung for additional temperature sender/switch and mounting clips. The built-in automatic transmission cooler has 1/4"NPT fittings. 23"H x 24-1/2"W. Core width is 22".

Radiator Fin Tool Kit

Hand held tool straightens and repairs damaged fins in most radiators, coolers, and air conditioning condensers. Repairing damaged fins provides better airflow through core, increasing cooling ability. Six interchangeable heads in 13, 15, 16, 17, 18 and 20 fins per inch.

Direct Fit Radiators

Aluminum direct fit radiators provide increased cooling over original copper radiator. Designed for performance vehicles, features include machined billet aluminum filler necks, fully welded construc-

tion and two rows of large 1" tubes properly spaced for maximum airflow and cooling on the street, even at lower speeds. Built-in automatic transmission coolers. O.E. fan shrouds may require modification for installation.

ALL30300..... 1967-69 GM F-Body (Camaro and Firebird)
PS Outlet, DS Inlet, 31"W x 19-1/2"H Overall,
23"W x 18"H Core

ALL30301 1970-81 GM F-Body (Camaro and Firebird)
PS Outlet, DS Inlet, 26"W x 19-1/2"H Overall,
20-1/2"W x 18"H Core

ALL30302 1982-92 GM F-Body (Camaro and Firebird)
PS Outlet, DS Inlet, 30"W x 19-1/2"H Overall,
24-1/2"W x 18"H Core

ALL30304..... 1968-77 GM A-Body (Chevelle, Cutlass, LeMans)
PS Outlet, DS Inlet, 34"W x 19-1/2"H Overall,
28-1/2"W x 18"H Core

ALL30306 **1966-80 Mopar** DS Outlet, PS Inlet, 29"W x 19-1/2"H Overall, 22-1/2"W x 18"H Core

ALL30308..... **1964-66 Mustang** PS Outlet, PS Inlet, 19-3/4"W x 21"H Overall, 18"W x 16"H Core

ALL30310 **1979-93 Mustang** DS Outlet, PS Inlet, 29-3/4"W x 19-1/2"H Overall, 24-1/2"W x 18"H Core

Upper Radiator Support Bracket

ALL30120

Universal upper support bracket is preformed to fit over the top of most radiator cores (up to 2-1/2" thick) to keep radiator secured in saddle style lower mounts. Steel bracket is .085" thick and has a 3/16" hole for riveting or bolting in place.





Radiator Honeycomb

ALL30158

Honeycomb screen mounts to front of radiator to protect fins/core from rocks and debris. Secure directly to radiator using ALL30085 mounting kit, sold separately. 19" x 26" x 1/2" thick.

Universal Mounting Kit ALL30085

Mounting kits are commonly used to mount electric fans, oil coolers, transmission coolers or honeycomb screen directly to a radiator. Kits include four 8" nylon mounting bolts with washers, rubber spacer blocks and retaining nuts. Bolts are pressed through the fins of the radiator to mount accessory.

Radiator Shaker Screen ALL30160

Commonly used on Dirt
Late Models, universal
shaker screen is mounted in
front of the radiator on most
dirt cars. Unit includes black
powder coated aluminum frame,
screen, 1/2" x 32" cross rod, springs and
retaining clips. Frame dimensions are 17" tall and 25"
wide

Sprint Car Radiator Rock Screen ALL30163

Aluminum rock screen helps to protect radiators from heavy rocks and mud. Mounting tabs are integrated into the frame for quick and easy installation to the front air box. Measures 20-1/2" wide x 12" tall and



weighs just under 1 lb. Quick turn springs are included.

Stainless Wire Screen

Use screen to protect radiators, oil coolers or other items. Size referenced is the approximate opening of the screen.

5/64" (.025" Wire Diameter)

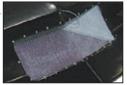
ALL22260 12" x 36" **ALL22262** 36" x 36"

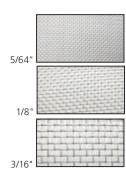
1/8" (.035" Wire Diameter)

ALL22265 12" x 36" **ALL22267** 36" x 36" **ALL22268** 36" x 48"

3/16" (.047" Wire Diameter)

ALL22270 12" x 36" **ALL22272** 36" x 36" **ALL22273** 36" x 48"





Radiator Caps

Higher cooling system pressure raises the boiling point of coolant to reduce the risk of overheating. Standard size caps fit 2-1/8" O.D. x 3/4" deep necks unless otherwise noted. Recovery system caps allow coolant to exit the cooling system into an overflow or recovery bottle as coolant heats and expands. As the system cools, recovery system caps will draw coolant back in to keep the cooling system full. Non-recovery system, but do not draw coolant back into the system.



ALL30129



ALI 30136



ALL30128

,		ALLSUIZO			
Part No.	Description	Pressure			
*Non-Reco	*Non-Recovery				
ALL30134	Stant/MotoRad Round	18-22 PSI			
ALL30135	Stant/MotoRad Round	21-25 PSI			
ALL30128	Stant/MotoRad Round	28-32 PSI			
*Recovery	*Recovery System				
ALL30132	Stant/MotoRad Round	16 PSI			
ALL30133	Stant/MotoRad Round With Lever	16 PSI			
ALL30130	Stant/MotoRad Round With Lever	18-22 PSI			
ALL30137	Stant/MotoRad Round Octagon	21-25 PSI			
ALL30131	Stant/MotoRad Round With Lever	21-25 PSI			
ALL30136	Round	22-24 PSI			
ALL30129	Round	29-31 PSI			
*Small Diameter Recovery System					
32mm I.D. x 16mm Deep					
ALL30124	Stant/MotoRad Round	16 PSI			
ALL30125	Stant/MotoRad Round	19-21 PSI			
ALL30126	Stant/MotoRad Round	28-32 PSI			

*Warning: High pressure radiator caps are made for use on race vehicles only. Do not use these caps on passenger vehicle cars with stock type radiators. It is recommended to pressure test the complete cooling system to the maximum level of pressure indicated on the cap. Failure to test cooling system to the proper pressure prior to installing the cap may result in damage to the cooling system and/or bodily injury.

Billet Aluminum Radiator Cap ALL30139

Polished billet aluminum cover is permanently pressed onto a 16 lb. recovery style radiator cap for enhanced appearance within any engine compartment. Cap is a suitable choice for most street driven vehicles.

Radiator Tank Heating Pad ALL76420

Fasten pad directly to the side of radiator tank to help add heat to your engine on cool nights. 2" x 15" high temperature silicone heating pad externally pre-heats coolant in the radiator and reduces overall warm up time.

Note: Additional pads are located in the Engine section for oil pan and oil tank applications to add additional heat to the engine before start-up.



Fan Shrouds

Allows fan to pull more air through the radiator for increased cooling. Aluminum and impact-resistant plastic shrouds fit fans up to 17" diameter. Radiator size reference is based on outside tank dimension. All shrouds are 19" tall.

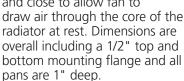


Part No.	Radiator Size*	Shroud Width	Shroud Depth	Max Fan Dia.	
Fits Allstar Radiators					
ALL30107	22"	17-3/8"	9-3/4"	15"	
ALL30112	24"	19"	9-3/4"	15"	
ALL30109	26"	20-3/4"	9-3/4"	17"	
ALL30110	28"	23"	9-3/4"	17"	
ALL30115	31"	25-3/4"	9-3/4"	17"	
Fits Griffin Radiators					
ALL30106	26"	21-1/8"	11"	17"	
ALL30108	28"	23"	11"	17"	
ALL30111	31"	26-1/4"	11"	17"	
Fits Howe Radiators					
ALL30114	26"	22-1/2"	11"	17"	
ALL30116	28"	24"	11"	17"	
ALL30111	31"	26-1/4"	11"	17"	

^{*}Radiator size reference is based on outside tank dimension.

Aluminum Electric Fan Shrouds

Aluminum shrouds are designed to work with electric fans mounted as a puller behind the radiator. Special air release flaps allow additional airflow to pass through the core and shroud as the vehicle is moving, and close to allow fan to





Fan Sold Separately

ALL30060	16-3/4" >	(18-3/4"	Single 16	" Fan
ALL30061	18-3/4" >	(18-3/4"	Single 16	" Fan
ALL30062	20-3/4" >	k 18-3/4"	Single 16	" Fan
ALL30063	25-3/4" >	(18-3/4"	Single 16	" Fan
ALL30064	25-3/4" >	(18-3/4"	Dual 12"	Fans



Tony Grzelakowski

Blower Fan Cool Box

ALL30001

Help cool down engine between practice sessions or races. Outside plenum works with Allstar's ALL30002 blower fan, creating a forced air cooling system designed to fit the grill opening of most template body noses. Plenum suspends by straps that attach to the hood pins, allowing the car to be raised for adjustments or maintenance. Assembly required and may need slight trimming due to blower fan variances.

Blower Fan ALL30002

Compact, plastic blower moves up to 300 CFM of air. The quiet electric blower has three speeds and can be adjusted to move cooling air wherever it's needed, up to 30 ft. away. Weighs just 8 lbs. with two built-in receptacles and a 12' long power cord. Optional heater accessory (sold separately) attaches to front of blower and plugs into one of the receptacles to transform blower into a heater.

Blower Fan Heater Accessory

ALL30003..... 5300 BTU, 115V AC 1400 Watts, Heater With Blower Unit Draws 11.7 Amps, Use With ALL30002 Only, Weight 3 Lbs.

Radiator Air Scoop For Sprint Car

Scoop fastens around a tube or the front crossmember of most chassis to maximize airflow through the radiator, increase cooling efficiency and at the same time, create down force. Black plastic scoop is a universal design that will fit a variety of cars and the aluminum scoop is designed for most raised rail cars. Scoop is commonly fastened to the chassis with quick turn fasteners.

ALL23224 Plastic 22" x 11" ALL23225 Aluminum 22" x 13"



Steve Irwin



ALL30074

Curved Blade Electric Fans

Electric fans require very little amperage and are suitable for use in race car or tow vehicle. Fans are set up as "puller" units, mounted behind the radiator. By flipping blades, reversing wires, and mounting in front of radiator, fans will operate in "pusher" configuration. Each unit includes a mounting kit.

ALL30070 10", 775 CFM ALL30072 12", 925 CFM ALL30074 14", 1530 CFM ALL30076 16", 1980 CFM

ALL30085..... Replacement Mounting Kit

Molded Nylon Fans

Lightweight 6-blade fans are economical and very durable. Universal bolt pattern with a 5/8" pilot hole.

ALL30091 14" Dia. ALL30092 15" Dia. ALL30093 16" Dia. ALL30094 17" Dia. ALL30095 18" Dia.



Plate installs beneath the mounting hardware to strengthen fan mounting location and prevent hardware from damaging the fan.



6-Blade Fans

Heavy-duty, 27° 6-blade fans, available with aluminum or steel blades, can move the volume of air needed to keep race engines cool. Universal bolt pattern with a 5/8" pilot hole.

ALL30096..... 15" Dia. Aluminum Blades ALL30097..... 17" Dia. Aluminum Blades ALL30102..... 15" Dia. Steel Blades ALL30103..... 17" Dia. Steel Blades ALL30100..... 18" Dia. Steel Blades

GM Style 4-Blade Steel Fan

ALL30099

Steel 4-blade fan is a direct replacement for the popular GM 4-blade fan. Fan features a 60° blade design, a universal bolt pattern with a 5/8" pilot hole and weighs approximately 3 lbs. Small diameter flat washers included for proper installation.

Tech Tip:

This four blade fan was originally designed for use in O.E. production vehicles. When this fan is used in high performance applications it is recommended that fan and mounting fasteners be inspected as a part of regular vehicle maintenance.

4-Blade Steel Fans

Steel high RPM fans are available in 15", 18" or 19". All have a universal bolt pattern with a 5/8" pilot hole. Riveted reinforcement plate adds strength and high pitch 32° blades increase airflow. Painted black to resist corrosion.

ALL30104 15" Dia. **ALL30105** 18" Dia. **ALL30101** 19" Dia.

Fan Spacer Kits

Fan spacers position fan closer to radiator or fan shroud and away from pulleys. 1-1/2" and larger spacers are uniquely designed allowing spacer to remain bolted to water pump while changing fans. Aluminum spacers include 3/4" to 5/8" water pump shaft reducer bushing, four Allen bolts to secure spacer to water pump and four hex bolts with washers to secure fan to spacer. Spacers work with 1-3/4" bolt circle flanges only.

ALL30180* ... 1/2" ALL30186..... 2" ALL30182* ... 1" ALL30188.... 2-1/2" ALL30184 1-1/2" ALL30190..... 3"

ALL30192 3-1/2"

ALL99027 Replacement Reducer Bushing (5/8" to 3/4")





Steve Trendell



Aluminum SB Chevy "Short Style"

Water Pump ALL31100

Popular "short style" water pump that was originally used on pre-1969 small block Chevrolets. Pumps are built using all new components and an aluminum body for added weight savings over original cast iron pumps. Pump fea-

tures a 3/4" main shaft and bearings with a 5/8" pilot and a billet steel hub drilled for both small and large fan bolt patterns, making this a good choice for street and mild performance vehicles. Block mount to fan hub dimension is 5-5/8". This pump is not recommended for use with mechanical fans over 5,000 RPM. Above this RPM, use the ALL31105 pump with a 3/4" shaft/bearing.

Note: Water pump may need to be clearanced for use with 8" dampers.

Aluminum SB Chevy "Corvette Style" **Water Pumps**

This aluminum version of "Corvette style" water pump was originally used on 1971-82 small block Chevrolet Corvette, but is now used throughout the motorsports industry. Pump is built using all new components and an aluminum body for added weight savings over original cast iron pumps. Pump features a 3/4" main shaft and bearings with a 3/4" pilot and a billet steel hub that has a set screw retainer for use on higher

RPM applications. Block mount to fan hub dimension is 5-13/16".

ALL31105 Water Pump

ALL31106 Water Pump With 3/8"NPT Bypass Ports And Cam Stop Hardware

Note: Water pumps may need to be clearanced for use with 8" dampers.

Water Pump Cam Stop Kit **ALL99415**

Water pump cam stop kit includes a 2" long 3/8"-24 threaded stud, washer and nut to replace or add a cam stop bolt to a water pump equipped with a stud mounting boss. Stud can be tightened against timing cover when cam buttons are used to help prevent "cam walk".

Water Pump Spacer Kits

Kits provide additional clearance needed for belt or gear drive timing systems. Gaskets are included.

ALL31070 1/8" ALL31071 1/4" ALL31072 3/8" ALL31073 1/2"

ALL87230 Replacement Gaskets



- Black Anodized Finish
- Machined from 6061 T6 Billet Aluminum
- High flow electric motor perfect for race applications
- F-Body inlet/outlet location

Pair with our Allstar inline thermostat housing if a thermostat is required! See page 71, ALL31160.

GM LS Coolant By-Pass/Crossover Plugs

ALL31170

ALL31105

ALL31106

Plugs provide a location to bleed air from cooling system of most GM LS engines. Replace factory original plugs or use in place of factory crossover steam tubes. Kit includes two plugs with o-rings.







Pulley Shim Kits

Use shim kits to properly align pulleys. Water pump shims have dual bolt hole pattern to fit most GM and Ford water pumps. Crank pulley spacers are for small block Chevys.

ALL31064 Water Pump, 1/16", 1/16", 1/8" (3 Shims)

ALL31066 Crankshaft, 1/16", 5/64", 1/8" (3 Shims)



ALL31066

Aluminum SB Chevy Reduction Pulleys

Specifically for short or Corvette water pumps, pulleys work with power steering pump and pulley to provide a

ratio within the GM specified RPM range. Race engine RPM differs greatly from street engines. For 30% less water pump speed and reduced weight and inertia, the crankshaft and water pump



ALL31040

pulleys are smaller in diameter than standard reduction pulleys. Acceleration capabilities are greatly enhanced.

ALL31030 .. Crankshaft Pulley (4-3/4" Diameter)

ALL31040 .. Water Pump Pulley, Short Pump With 5/8" Pilot Hole (6-5/8" Dia.)

ALL31050 .. Water Pump Pulley, Corvette Pump With 3/4" Pilot Hole (6-5/8" Dia.)

ALL86120...Belt, Crank To Water Pump, 31.5"

ALL86122...Belt, Crank/Water Pump/Block Mount P/S Pump, 39" ALL86124...Belt, Crank/Water Pump/Head Mount P/S Pump, 42"

Note: Crankshaft pulley will work with either water pump pulley without spacers.

ALL31072



SB Chevy 1:1 **Ratio Pulley Kits**

Double groove aluminum pulley kits feature 6-5/8" diameter pullevs and include common 15/32"

with block or head mounted Allstar power steering kits. Pulley kits are designed to work with short style water pumps with a 5/8" shaft that measure 5-5/8" from block mount to hub face. Components also sold separately.

ALL31080 Kit For Block Mount Power Steering Pump **ALL31082** Kit For Head Mount Power Steering Pump ALL31083 Kit For No Power Steering

Related Parts

V-belts to work

ALL31084..... 1:1 Crank Pulley (6-5/8") **ALL31085** 1:1 Water Pump Pulley (6-5/8") ALL86121 Belt, Crank to Water Pump, 34"

ALL86123 Belt, Crank/Water Pump/Block Mount P/S Pump, 41" ALL86125 Belt, Crank/Water Pump/Head Mount P/S Pump, 44"

V-Belts

Premium quality V-belts are perfect replacements for worn or cracked belts.

ALL86120 31.5" ALL86121 34" ALL86122 39"



ALL86123 41" ALL86124 42" ALL86125 44"

SB Chevy 1:1 Ratio Reduction Pulley Kits

Premium 1:1 pulley kits feature 4-3/4" diameter pulleys with 1/2" wide grooves for use with industrial grade belts. The increased belt width helps reduce belt slippage when used

with high performance mechanical fans. The small diameter pulley combination provides a 30% RPM reduction when using a power steering

Note: Pulleys are designed to use with short "Corvette Style" 3/4" shaft water pump (ALL31105 or ALL31106).

ALL31090 Kit For Block Mount Power Steering Pump ALL31092 Kit For Head Mount Power Steering Pump ALL31093 Kit For No Power Steering

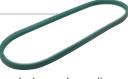
Replacement Parts

pump with a 6" pulley.

ALL31094 1:1 Crank Pulley (4-3/4") **ALL31095** 1:1 Water Pump Pulley (4-3/4")

Performance V-Belts

Industrial grade V-belts are slightly wider than standard V-belts and are used with the Allstar reduction style 1:1 pulley kits with 1/2" wide



pulley grooves. The wider contact area helps reduce slippage when using high performance mechanical fans.

Note: These will not work with standard width pulleys that are designed for 7/16" wide V-belts.

ALL86127 29" ALL86129 41" ALL86128 37"

Crank Pulley Mandrel Kit ALL31031

Kit prevents mandrel bolt breakage and is made specifically for use with Alistar ALL31030 crank pulley. Mandrel is attached to the crankshaft pulley with

three bolts, while the vibration damper is retained with the stock bolt. The mandrel bolt is then connected to the mandrel – not to the crankshaft – to reduce engine harmonics (helps prevent loosening or breaking). Kit includes spacers, pulley guides, and bolts to work effectively with most 3, 4, and 5 stage dry sump pumps, alone or with belt driven fuel pumps. Pulleys sold separately.

Replacement Parts

ALL31032 Crank Pulley Mandrel ALL31033 Mandrel End Washer ALL31034 Stepped Washer ALL31035 Pulley Guide ALL31036 Mandrel Keyway, 1/8"

ALL31037 Mandrel Bolt, 5/16"-18 x 1" (3-Pack) **ALL31038** Mandrel End Bolt, 1/2"-13 x 4"

Mandrel Spacers

Aluminum spacers properly space and align pulleys when used with a 1/8" keyed mandrel. The same spacers are found in the ALL31031 Mandrel Kit. Sold each.

ALL31020 1/4" Thick Spacer **ALL31022** 1/2" Thick Spacer **ALL31024** 3/4" Thick Spacer **ALL31026** 1" Thick Spacer ALL31028 1-1/4" Thick Spacer

1" wide, assorted lengths.

ALL86130 21.0" ALL86132 22.5"

ALL86136 25.5" ALL86134 24.0" ALL86138 27.0"

TECH TIP

Belt Tension - Gilmer style belts are properly tensioned when belt can be twisted 1/2 turn.











Inline Electric Water Pump ALL31130

Inline water pump will flow up to 50 GPM, which is suitable for many applications throughout the motorsports industry. Pumps are designed to provide better cooling and space savings over most mechanical pumps. Pump can be used on 12-16 volt systems and only draws 6 amps. Electric motor is sealed to help prevent damage or corrosion and billet 6061-T6 aluminum housing is black hard coat anodized with threaded mounting holes for easy mounting. Use with Allstar ALL31135-31140 adapter fittings. Complete unit weighs 6 lbs. Wire harness with 20 amp inline fuse included.

ALL31135 1-1/4" Hose Fitting ALL31136 1-1/2" Hose Fitting ALL31137 1-3/4" Hose Fitting ALL31138 -12AN Fitting ALL31139 -16AN Fitting ALL31140 -20AN Fitting



ALL31135 ALL31138

Water Pump AN Block Adapters

Adapters mount in place of standard mechanical water pumps when using inline or remote electric water pumps. Ford pump adapters require water pump back plates for complete installation.

ALL31150 SB Chevy -12AN **ALL31151** BB Chevy -12AN **ALL31152** SB Ford -12AN

ALL31153 SB Ford Water Pump Back Plate (Early) ALL31154 SB Ford Water Pump Back Plate (Late)

Y-Block Adapter ALL31159

Billet aluminum Y-Block is commonly used when connecting inline or remote electric water pumps to AN block adapters.

1-1/4"-12 inlet port accepts Allstar ALL31135-31140 O-ring style fittings for direct hose or AN style connections. Outlet ports accept standard -12AN ORB fittings to connect to block adapters.

ALL31135 1-1/4" Hose Fitting ALL31136 1-1/2" Hose Fitting ALL31137 1-3/4" Hose Fitting ALL31138 -12AN Fitting ALL31139 -16AN Fitting ALL31140 -20AN Fitting



ALL31135 ALL31138

Remote Mount Electric Water Pump ALL31120

Compact water pump will flow up to 25 GPM which is perfect for intercoolers, dragsters or compact engines. Pump can be used on 12-16 volt systems and only draws 8 amps. Electric motor is sealed to help prevent damage or corrosion and 6061-T6 billet aluminum housing is black hard coat anodized

with threaded mounting holes for easy mounting. Accepts -12AN ORB fittings, complete unit weighs only 5 lbs.

Polished Water Necks

Aluminum water necks fit most Chevrolet V8's. Two-piece design necks swivel 360° to accommodate LH and RH radiator inlets. An O-ring seal and two chrome plated socket head cap screws are included.

ALL30170 90° Neck **ALL30173** 75° Neck **ALL30171** 45° Neck **ALL30172*** Straight Neck

Related Parts:

ALL99136 Replacement O-Ring

ALL30171

ALI 30172

ALL30170

‡One-Piece Fixed Neck

SB Ford Chrome Plated Water Neck ALL30174

Cast aluminum 45° water neck fits small block Ford. Includes an O-ring for sealing the base flange and two hex head bolts.



Billet Aluminum Swivel Water Necks

Billet aluminum water necks fit most
Chevy V8's, accept most standard thermostats and swivel a full 360° to simplify
connection of LH or RH radiator hoses to engine. Black
anodized finish helps protect against corrosion. Stainless
steel hardware and an O-ring for sealing the base of the
water neck to engine are included.

ALL30370 1-1/2" **ALL30372** -16AN **ALL30371** 1-3/4" **ALL30373** -20AN

Billet Water Neck Spacer ALL30375

Billet aluminum spacer fits between intake manifold and water neck, providing connection options for temperature senders or additional water lines. 1" tall spacer fits most Chevy V8's. Includes four 1/2"NPT ports with plugs and an O-ring seal on one side, eliminating the need for a gasket.

Water Outlet Restrictor Kit ALL30241

Restrictor replaces the thermostat to control the flow of water through the cooling system. Kit contains three 2-1/8" O.D. aluminum restrictors with 5/8", 3/4" and a 1" center I.D. hole that fit most GM V8 or V6 and SB Ford water outlets.

Aluminum Radiator Hose Restrictor ALL30242

Lower radiator hose restrictor helps keep the water in your radiator longer to improve cooling. Machined aluminum restrictor has a 5/8" I.D. and will fit into most 1-3/4" radiator outlets or radiator hose.







Inline Thermostat Housing

ALL31160

Black anodized aluminum inline thermostat housing fits GM-style thermostats. Use with 1.5" hose size.

Upper Radiator Hose Kit ALL30260

Upper hose kit eliminates the concern of the upper hose collapsing and fits a variety of radiator widths. 1-1/2" hose kit includes a 90° steel tube and two silicone hoses.



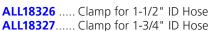
NEW

Radiator Hose I.D. Reducer ALL30240

Rubber reducer allows a lower radiator hose with a molded-in spring to be used as an upper radiator hose. In continuous high RPM applications, the upper hose can collapse limiting coolant flow. Upper hoses with an internal spring support can also collapse if the spring is drawn into the radiator tank. Reducer fits inside 1-3/4" lower radiator hoses which have molded-in reinforcement springs and reduces the I.D. from 1-3/4" to 1-1/2".

Billet Aluminum Hose Clamps

Billet aluminum clamps provide a lightweight finished look for securing popular standard and silicone style radiator hoses.





Stainless steel constructed band clamps provide a better sealing option over traditional hose clamps in performance applications. Clamps feature a 3/4" wide band and are sold in pairs.



See page 121 for additional sizes



Two-ply coolant hose is flexible and adapts to a variety of applications.



Abrasion resistant cover will not crack or harden.

1-1/2" I.D. Upper Hose	1-3/4" I.D. Lower Hose
ALL30200 12"	ALL30220 11"
ALL30202 14"	ALL30222 13-1/2"
ALL30204 15-1/2"	ALL30224 16-1/2"
ALL30206 17 "	ALL30226 19"
ALL30208 20"	ALL30228 23-1/2"
ALL30210 22"	Hose Clamps (2-Packs):
ALL30212 25"	ALL18334 Clamps, Upper Hose
ALL30214 30"	ALL18336 Clamps, Lower Hose

Hose Clamps

Heavy duty all stainless steel construction clamps are easily tightened with a deep slot hex head screw. Superior to standard hardware store clamps. For best connection, select the clamp which fits within the range of hose O.D.

	•		
Part No.	Min Hose O.D.	Max Hose O.D.	
2-Pack			
ALL18330	1/4"	5/8"	
ALL18332	1/2"	1-1/8"	
ALL18334	1"	2"	
ALL18336	1-5/16"	2-1/4"	
ALL18338	1-9/16"	2-1/2"	
ALL18340	1-5/8"	3-1/2"	
ALL18342	2-5/8"	4-1/2"	
10-Pack			
ALL18330-10	1/4"	5/8"	
ALL18332-10	1/2"	1-1/8"	
ALL18334-10	1"	2"	
ALL18336-10	1-5/16"	2-1/4"	
ALL18338-10	1-9/16"	2-1/2"	

Power Grip Clamps

Gates Power Grip Clamps seal when heated with a standard heat gun, forming a tight band around standard rubber and silicone coolant hoses to provide a secure con-



nection, even under harsh race condi-

tions. Installed clamps provide a smooth, flush fit around hoses and eliminate exposed sharp edges associated with standard hose clamps. Select the band clamp which fits within range of hose O.D. for best connection. Sold each.

Part No.	Min Hose O.D.	Max Hose O.D.
ALL30250	1/2"	11/16"
ALL30251	11/16"	13/16"
ALL30252	13/16"	15/16"
ALL30253	15/16"	1-1/16"
ALL30254	1-1/16"	1-3/16"
ALL30255	1-3/16"	1-1/2"
ALL30256	1-1/2"	1-3/4"
ALL30257	1-3/4"	2"
ALL30258	2"	2-1/4"

Note: Clamps are not designed for use with flammable liquids or fuel line connections.



Expansion Tanks

Aluminum expansion tanks are commonly mounted as the highest point of the cooling system and used as a fill point on vehicles that have a low mounted radiator or when the fill point on the radiator is not accessible. The 1/2 "NPT bottom supply fitting is commonly connected to the low pressure side of the cooling system and the return fitting is connected to a port located high on the engine to help release any air trapped in the system. Tanks feature a machined filler neck to accept most standard radiator caps and a 1/8 "NPT port for connecting to an overflow tank.

ALL36115 Tank With Attached Mounting Bracket 28 oz. Capacity With a 3/8"NPT Return Fitting ALL36116 Tank With Separate Mounting Bracket 20 oz. Capacity With a 1/4"NPT Return Fitting

Plastic Overflow Tanks

Plastic tanks have a one quart capacity and help prevent coolant from spilling onto the ground. Tanks have swivel fittings that accept 5/16" overflow hose and have 1/4"-20 molded inserts for easy mounting.

ALL36154 Tank With Drain Valve (Non-Recovery)
ALL36155 Tank with 90° Fitting (Recovery)

Overflow Tank Brackets

Billet aluminum bracket mounts most popular plastic overflow tanks to round chassis tubing and pivot to any angle. Tank mounting holes accept 1/4" fasteners and are slotted to fit tanks with mounting holes between 3-1/2" to 4" CTC.

ALL14200 Bracket For 1-1/2" Tubing **ALL14201** Bracket For 1-3/4" Tubing

Overflow Tank ALL36112

Aluminum tank has a 3/8"NPT bung on the side and a 1/2"NPT bung on the bottom that includes fitting and petcock. 1 quart capacity tank can be used in many forms of competition and is mandated by most sanctioning bodies to prevent coolant from spilling on the racing surface.

Stainless Overflow Tanks

Stainless steel tanks capture coolant overflow and recirculates it to the radiator. Machined aluminum cap twists into the filler neck and seals with an O-ring. Inlet/outlet fittings accept 1/4" diameter hose. Unit includes mounting brackets and hardware. Measurements are of tank body; add 2" for overall length.

ALL36150 2" x 13" **ALL36151** 2" x 15"

Petcock ALL99030

Replacement petcock for Allstar breather and overflow tanks is also perfect for draining coolant from engines. 1/4"NPT threads.

Overflow Nozzles

Aluminum nozzle acts as a signal to the driver to indicate a possible overheating condition as the cooling system pushes out water. Nozzle with threaded body mounts in a body panel outside the drivers compartment and is available with a 1/4" barb or a -4AN male fitting.

ALL30178 Nozzle With 1/4" Barb Fitting **ALL30179** Nozzle With -4AN Male Fitting

Radiator Overflow Fitting ALL99312

Commonly used fitting threads into the filler neck on most radiators allowing connection to an overflow tank. Aluminum fitting has 1/8 "NPT threads and accepts a 5/16" hose.

Overflow Hose

Overflow hose, also referred to as fuel line is reinforced to help prevent kinking and is rated up to 50PSI. Size indicated is I.D. of hose.

Hose I.D.	3' Length	25' Length
1/4"	ALL40350	ALL40351
5/16"	ALL40353	ALL40354
3/8"	ALL40356	ALL40357

Water Pressure Warning Kit

ALL80250

Warning kit senses pressure in the cooling system and alerts driver of a problem when coolant pressure drops below 4 PSI. In the event of coolant loss (i.e. blown radiator hose). The temperature gauge probe is no longer surrounded by coolant to detect the engine temperature, this will lead to a false temperature gauge reading and major engine damage.

Temperature Gauge Probe Adapters

Aluminum adapters are a nice upgrade from brass adapters and feature a longer length for use in shallow applications when the mechanical temperature gauge probe may contact the inside of a cylinder head or intake manifold. Extra length of fitting will still allow end of probe to protrude into the coolant for accurate readings.

ALL50203 3/8"NPT **ALL50204** 1/2"NPT

Mechanical Gauges

Allstar Performance 2-5/8" mechanical gauges feature a full 270° sweeping needle,





silver faced background, black bezel and are backlit for easy reading, even in low light conditions. Perfect for building custom dash panels or when adding mechanical gauges to replace existing gauges or warning lights.

See Page 83 For A Complete Listing Of Gauges And Gauge Panels.



Primary Wire

Single conductor stranded copper wire with polyvinyl insulation remains flexible and is abrasion resistant. Stranded copper is the wire of choice for many projects when building custom wire harnesses or adding accessories.



20AWG

Used for low voltage sensors, indicator lights, instrument panel or dash lighting.



Color	50' Coil	100' Spool
Red	ALL76500	ALL76510
Black	ALL76501	ALL76511
White	ALL76502	ALL76512
Green	ALL76503	ALL76513
Yellow	ALL76504	ALL76514
Brown	ALL76505	ALL76515
Blue	ALL76506	ALL76516

14AWG

Most popular when fabricating harnesses for general use including lighting of headlights, taillights and brake lights, ignition systems and interior accessories such as radios, interior fans and gauge panels.

Color	20' Coil	100' Spool
Red	ALL76540	ALL76550
Black	ALL76541	ALL76551
White	ALL76542	ALL76552
Green	ALL76543	ALL76553
Yellow	ALL76544	ALL76554
Brown	ALL76545	ALL76555
Blue	ALL76546	ALL76556

12AWG

Wire can be used to supply power to ignition boxes, cooling fans, fuel pumps and other higher amperage accessories including power to electric trailer brakes.

Color	12' Coil	100' Spool
Red	ALL76560	ALL76565
Black	ALL76561	ALL76566
White	ALL76562	ALL76567
Blue	ALL76563	ALL76568

10AWG

Commonly used for higher amperage applications including alternator charging wire and supplying power to trailer for interior lighting or charging trailer batteries when utilizing tow vehicle charging system.

Color	10' Coil	75' Spool
Red	ALL76570	ALL76575
Black	ALL76571	ALL76576
White	ALL76572	ALL76577

Wire And Cable Cutters ALL11003

Capable of cutting copper stranded wire from 20 gauge primary wire to 1/0 gauge battery cable. These specially designed cutters will not flatten wire during cutting, which is helpful when installing connectors and building battery cables. Cutters are not designed to cut steel wire.

Heat Sleeve

High temperature silicone coated fiberglass sleeving is non-flammable and resists temperatures up to 500°F.



An excellent choice for protection of fuel lines, wiring, cables and various similar uses. Sleeving is resistant to gasoline and many other chemicals. Sold in 3' lengths. Size referenced is sleeve I.D. or O.D. of hose to be covered.

ALL34280 1/4" Red	ALL34290 1/4" Black
ALL34282 1/2" Red	ALL34292 1/2" Black
ALL34284 3/4" Red	ALL34294 3/4" Black
ALL34285 7/8" Red	ALL34295 7/8" Black
ALL34286 1" Red	ALL34296 1" Black

Braided Wire Wrap

Split loom braided wrap is easily applied over existing hoses or wiring to conceal



and protect against wear or abrasion. Wrap features a 25% overlap based on the nominal size listed, allowing the wrap to bend and flex without opening. Wrap is constructed of polyethylene material, heat resistant up to 250°F and easily cuts with a hot knife or a soldering iron with knife attachment.

ALL76610 1/8" x 20'	ALL76616 3/4" x 5'
ALL76612 1/4" x 15'	ALL76618 1" x 10'
ALL76614 1/2" x 10'	

Spiral Wire Loom

Loom keeps wiring bundled together for a neat appearance

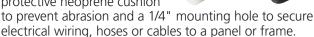


and can be easily removed when adding or removing wires during wiring harness changes. Open design makes identifying or locating a wire simple and will not hold dirt and moisture like solid looms. Loom also provides abrasion resistance to protect wiring or hoses. High density polyethylene material is rated from -30°F to 165°F and sold in 10'. lengths.

ALL76600	1/4"
ALL76602	1/2"
ALL76604	3/4"

Line Clamps

Aluminum clamps have a protective neoprene cushion



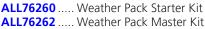
Black nylon clamps have a 3/16" mounting hole to secure electrical wiring, hoses or cables to a panel or frame.

	Aluminum		Aluminum		Ny	lon
Clamp Size	10-Pack	50-Pack	10-Pack	50-Pack		
1/8"	-	_	ALL18309	ALL18309-50		
3/16"	ALL18300	ALL18300-50	ALL18310	ALL18310-50		
1/4"	ALL18301	ALL18301-50	ALL18311	ALL18311-50		
3/8"	ALL18302	ALL18302-50	ALL18312	ALL18312-50		
1/2"	ALL18303	ALL18303-50	ALL18313	ALL18313-50		
5/8"	ALL18304	ALL18304-50	ALL18314	ALL18314-50		
3/4"	ALL18305	ALL18305-50	ALL18315	ALL18315-50		
7/8"	ALL18306	ALL18306-50	-	_		
1"	ALL18307	ALL18307-50	ALL18317	ALL18317-50		
1-1/4"	ALL18308	ALL18308-50	_	_		



Weather Pack Kits

Kits include a variety of tower housings, shroud housings, seals and terminals to build 1, 2, 3, 4, and 6 pin connectors for standard 16-14 gauge wire. Kits also include a pin removal tool and convenient carrying case.





Weather Pack Connector Individual Kits

Weather pack connectors are designed for harsh weather conditions. Originally used by top vehicle manufacturers, the reliability of these connectors has been proven for years and they have become common in many applications requiring a weather-proof connection. Snap lock feature assures positive connection and allows connector to be easily separated as needed. Connectors are rated up to 20A at 12V DC and include tower housing, seals and terminals for standard 16-14 gauge wire.

ALL76265 1-Wire **ALL76266** 2-Wire **ALL76267** 3-Wire **ALL76268** 4-Wire Flat **ALL76269** 4-Wire Square **ALL76270** 6-Wire



Weather Pack Individual Components

Terminals And Seals, 10-Packs

Gauge	Tower (Female)	Shroud (Male)	Seal Part No.
22-20	-	-	ALL76280 (Purple)
20-18	ALL76272	ALL76275	ALL76281 (Green)
16-14	ALL76273	ALL76276	ALL76282 (Gray)
12	ALL76274	ALL76277	ALL76283 (Blue)

ALL76284 Seal Plug, 10-Pack

Housings, Each

Description	Tower (Female)	Shroud (Male)
1-Pin	ALL76288	ALL76289
2-Pin	ALL76290	ALL76291
3-Pin	ALL76292	ALL76293
4-Pin	ALL76294	ALL76295
4-Pin Square	ALL76296	ALL76297
6-Pin	ALL76298	ALL76299



ALL76284

Weather Pack Terminal Tool

ALL76264

Tool removes male and female pin terminals from weather pack connectors without damage.

Weather Pack Pliers ALL76221

Weather pack pliers will crimp most popular 22-10 gauge non-insulated terminals. 8" overall length.

Test Leads With Alligator Clips ALL76216

30" long test leads are color coded red and black. Clips are 5 amp rated.

Universal Wire Connectors

Molded connectors include a male and female end, joined by a loop of 16 gauge primary wire which may be cut to length. Useful for switch and gauge panels or accessories that are disconnected frequently.

ALL76231 One Wire With 12" Loop ALL76232 Two Wire With 12" Loop ALL76233 Three Wire With 48" Loop ALL76234 Four Wire With 48" Loop ALL76235 Five Wire With 48" Loop

HEI Connectors

The proper connector when repairing or wiring HEI ignition systems. Connectors have a built-in retaining clip same as originals to secure connector to ignition cap. The included pigtail wires are also the correct gauge for easy installation.

ALL81214 12V Ignition Connector ALL81215 Tach Connector



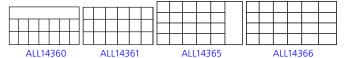
Stewart Friesen



Storage Cases

These handy storage cases help organize many items around the shop, trailer or home such as electrical connectors, quick turn fasteners, tire groover blades, small fasteners and many more items. Curved bottom compartments

create a smooth scoop, making it easy to remove the smallest of items. Molded-in dividers prevent items from slipping under dividers and accidentally mixing product.



ALL14360 Plastic Case 15 Compartment, 11" x 7" x 1-3/4" ALL14361..... Plastic Case 18 Compartment, 11" x 7" x 1-3/4" ALL14365 Metal Case 21 Compartment, 9-1/2" x 13-1/2" x 2" ALL14366 Metal Case 24 Compartment, 9-1/2" x 13-1/2" x 2"

Wire Terminal Kit

ALL76224

A 100-piece terminal kit with a generous supply of the most commonly used connectors for automotive wiring. A sturdy plastic case with divided



compartments helps keep connectors organized.

Each Kit Includes:

22-18ga.	16-14ga.	12-10ga.
(10) Butt Connectors	(10) Butt Connectors	(10) Butt Connectors
(8) Ring Terminals #6	(10) Ring Terminals #10	(8) Ring Terminals #10
(8) Ring Terminals #8	(8) Ring Terminals 1/4"	(7) Ring Terminals 3/8"
-	(7) Female Blade	-
_	(7) Male Blade	-
-	(7) Spade	-

Ratcheting Crimp Pliers ALL76220

Perform professional quality crimps on most standard electrical connectors. Pliers include jaws for 22-18, 16-14 and 12-10 gauge connectors and are easily compressed with help from the ratcheting mechanism which releases when connector is fully crimped.

Electrical Tape ALL14280

Protect electrical connections and secure wires. 3/4" x 60' roll. UL approved.



Crimp style connectors work great when building custom wire harnesses or making repairs to existing wiring. Tin plated copper terminals are available in a variety of types and sizes.



Non-insulated terminals are designed to be crimped but may also be soldered for a more secure complete connection. Often used with separate heat shrink that is applied after connection is made. Package of 20.

Non-Insulated	Terminals	22-18	16-14	12-10
Butt Connectors		ALL76000	ALL76010	ALL76020
	#6 Hole	ALL76001	ALL76011	ALL76021
	#8 Hole	ALL76002	ALL76012	ALL76022
Dina Tarminale	#10 Hole	ALL76003	ALL76013	ALL76023
Ring Terminals	1/4" Hole	ALL76004	ALL76014	ALL76024
	5/16" Hole	ALL76005	ALL76015	ALL76025
	3/8" Hole	ALL76006	ALL76016	ALL76026
Diada Tarrainala	Male 1/4"	ALL76007	ALL76017	ALL76027
Blade Terminals	Female 1/4"	ALL76008	ALL76018	ALL76028



Vinyl-insulated terminals are the most popular crimp terminal used in a variety of applications. PVC insulated sleeve is securely attached to terminal and has a flared end for easy installation. Package of 20.

Vinyl Insulated Terminals		22-18	16-14	12-10
Butt Connectors		ALL76030	ALL76040	ALL76050
	#6 Hole	ALL76031	ALL76041	ALL76051
	#8 Hole	ALL76032	ALL76042	ALL76052
Ring Terminals	#10 Hole	ALL76033	ALL76043	ALL76053
King Terminais	1/4" Hole	ALL76034	ALL76044	ALL76054
	5/16" Hole	ALL76035	ALL76045	ALL76055
	3/8" Hole	ALL76036	ALL76046	ALL76056
Blade Terminals	Male 1/4"	ALL76037	ALL76047	ALL76057
Blade Terminals	Female 1/4"	ALL76038	ALL76048	ALL76058



Heat shrink terminals protect connections from corrosion. Terminals with attached shrink tube are adhesive lined to grip wire insulation and conform to crimp when heated, sealing out moisture. Package of 10.

Heat Shrink	Terminals	22-18	16-14	12-10
Butt Connectors		ALL76060	ALL76070	ALL76080
	#6 Hole	ALL76061	ALL76071	ALL76081
	#8 Hole	ALL76062	ALL76072	ALL76082
Ring Terminals	#10 Hole	ALL76063	ALL76073	ALL76083
King Terminais	1/4" Hole	ALL76064	ALL76074	ALL76084
	5/16" Hole	ALL76065	ALL76075	ALL76085
	3/8" Hole	ALL76066	ALL76076	ALL76086
Blade Terminals	Male 1/4"	ALL76067	ALL76077	ALL76087
Blade Terminals	Female 1/4"	ALL76068	ALL76078	ALL76088



7/8"

1"

Heat Shrink Tubing

Single wall tubing is placed over wiring and electrical connectors to seal and strengthen electrical connections. Tubing is pre-cut



to 6" and has a 2:1 shrink ratio, meaning this with shrink to approximately half the size when heat is applied using a heat gun or other heat source.

Heat Shrink Assortment Kit

ALL76160 Includes 9pc of 1/8" and 3/16", 6pcs of 1/4" and 3pcs of 3/8" and 1/2

Individual Sizes (Pack of 20)

ALL76162 1/8"	ALL76165 3/8"
ALL76163 3/16"	ALL76166 1/2"
ALL76164 1/4"	ALL76167 3/4"

Grommet Set ALL18360

Grommets are perfect for protecting wiring and hoses that pass through panels up to 1/16" (.062") thick. Kit includes 36 grommets (6 of each size: 1/4". 5/16", 3/8", 1/2", 5/8" and 11/16"). Grommets are also available in size specific 10-packs.

Grommet Hole I.D. Panel Hole I.D. Part No. ALL18362 1/4" 3/8" **ALL18363 ALL18364** 5/16" 7/16" ALL18365 3/8" 1/2" **ALL18366** 1/2" 5/8'

Step Drill Sets

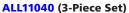
ALL18367

ALL18368

Drill multiple size holes with one bit. Drill sheet metal and aluminum without deforming or distorting. Bits start on contact, deburr, and chamfer while drilling, and do not require a center punch. Titanium nitride coated high speed steel. 1/4" shank.

5/8"

11/16"



Drill Bit	Sizes
Six Step	3/16", 1/4", 5/16", 3/8", 7/16", 1/2"
Nine Step	1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4"
	1/8", 5/32", 3/16", 7/32", 1/4", 9/32", 5/16", 11/32", 3/8", 13/32", 7/16", 15/32", 1/2"

ALL11041 (2-Piece Set)

//		
Drill Bit	Sizes	
I FIAMAN STAN	1/4", 25/64", 35/64", 11/16", 13/16", 7/8", 1", 1-1/8", 1-7/32", 1-1/4", 1-3/8"	
	3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8"	

Test Light ALL76215

Quickly diagnose electrical problems by testing for current in electrical circuits, relays, switches or fuses. Handheld test light



has a 36" lead wire with an insulated clip which fastens to a common ground and a sharp piercing point to probe insulated wire or terminals. Indicator light illuminates to identify powered circuits in 6-12V systems.

Nylon Tie Wraps

Secure electrical wiring, gauge lines and roll bar padding. 100 per bag. Nylon tie wraps are available in black, natural, red, blue, yellow and purple nylon.



Black	Red
ALL14120 3-3/4"	ALL14126 7-1/4"
ALL141226"	ALL14127 14-1/4"
ALL14123 7-1/4"	Blue
ALL14124 11-1/4"	ALL14128 7-1/4"
ALL14125 14-1/4"	ALL14129 14-1/4"
Natural	Yellow
ALL14130 3-3/4"	ALL14136 7-1/4"
ALL14132 6"	ALL14137 14-1/4"
ALL14133 7-1/4"	Purple
ALL14134 11-1/4"	ALL14138 7-1/4"
ALL14135 14-1/4"	ALL14139 14-1/4"

Nylon Flush Fit Tie Wraps

Flush fit design ties have the excess portion of the tie exit in the same direction as the original tie, helping to eliminate the protruding sharp portion remaining as found in standard ties. Package of 100.



ALL14395 8" Long ALL14396 11" Long

Nylon Tie Wraps With Mounting Holes

Built-in tab with mounting hole to easily secure wiring harnesses, hoses or cables to a panel with rivets or other fasteners. Package of 25.





Wire Tie Mounting Bases

Self-adhesive mounting bases provide a location for attaching standard wire ties to secure wiring, cables and hoses. Bases mount to clean flat surfaces and accept 75# and smaller wire ties. Package of 10.

ALL14116 3/4" x 3/4" Mounting Base **ALL14117** 1-1/8" x 1-1/8" Mounting Base



6-Circuit Fuse Block

ALL76180

This fuse block is a great power distribution starting point for up to six individual circuits which are protected by ATC/

which are protected by ATC/
ATO style fuses (sold separately). Block features a #10 power supply and six 1/4" male spade terminals for individual circuit connections. Fuse block is rated at 150 amps at 12 volts, maximum of 25 amps per circuit.



Fuse Terminals

Terminals attach to cartridge style fuses installed in fuse blocks to create an additional circuit to

to create an additional circuit to ALL76090 ALL76091 power accessories. Terminals slide over the protected leg or "fused" side (side of fuse block that does not have power when fuse is removed) of the fuse.

Package of 5.

ALL76090 Mini Fuse Style Terminal **ALL76091** ATC/ATO Fuse Style Terminal



Buss Bars

Buss bars create a remote power source for powering multiple accessories. Bar features a 1/4" power supply stud and 12 separate #8 connections. Insulated base measures 5-1/4" x 1-1/8"



wide and can be mounted with two #10 (3/16") fasteners. Bars include a removable protective cover and power supply boot. Protective covers are sold separately.

ALL76170...... Red Buss Bar Kit ALL76172...... Black Buss Bar Kit

Junction Block ALL76146

Junction block with single 10mm x 1.5 thread (3/8") stud offers a location to power multiple accessories from one power supply or a common place to locate ground wires. Block features two mounting holes for #8 faster

features two mounting holes for #8 fasteners for installation on firewall or panel.

30-Amp Circuit Breaker ALL76212

Circuit breaker protects electrical circuits similar to fuses but will cool and self-reset to maintain power to critical items such as headlights or ignition systems. Use circuit breaker to power accessories in a race car and to keep constant power to ignition. Steel case and mounting bracket provide durability and ease mounting to panels. #10-32 threaded stud terminals include nuts and lock washers.

30-Amp Relays

Relays are commonly used to control higher amperage components such as electric fuel pumps, cooling fans or water pumps rated up to 30 amps. Relays allow the use of a lower amp switch to turn on or control a component with a higher amp draw. A connector with a wiring harness and installation instructions are included.

ALL76186 Standard Relay
ALL76188 Weatherproof Relay

Plunger Style Brake Light Switch ALL76253

Popular two terminal brake light switch found in most vehicles from the 1950's to today. Ideal

for most applications, switch is spring loaded to the on position and turns off when contacted by the brake pedal assembly. Switch has 1/2" threads with jam nuts for easy mounting in a bracket, and two .250" blade type terminals.

Lever Style Brake Light Switch ALL76250

Switch is commonly used with underfloor mounted brake pedal assemblies where switch can contact the brake pedal arm. Spring loaded switch is designed to return to the open position and has two #10-32 tapped mounting holes, 5/8" on centers. Designed for easy two wire connection, one "+" supply and the other to power brake lights or a brake light relay. Switch is rated at 4.5 amps and features two male bullet terminals.

Pressure Activated Brake Light Switches

Switch is plumbed into the brake system and is activated by closing the electrical connection with rising



. . .

brake pressure (60-120 PSI). Designed for easy two wire connection, one "+" supply and the other to power brake lights or a brake light relay. Switches are rated at 4.5 Amps and have 1/8"-27 dry seal mounting threads.

ALL76251 Male Bullet Terminals **ALL76252** 6-32 Screw Terminals

Brake Pressure Safety Switch ALL76255

Brake pressure switch is wired into the ignition system and kills power to ignition when a sudden spike in brake pressure is sensed in the event of an accident or emergency. Switch has an adjustable cut-off pressure from 700-1900 PSI and resets automatically when brakes are released. A weatherproof cover protects the inner adjustment screw and seals the 18" long pigtail leads. 1/8"NPT male threads.



Battery Boxes

Universal, lightweight steel battery boxes may be welded or bolted to the frame. Boxes are available in two sizes and include hold down hardware.



ALL76100 12" Wide x 7-1/4" Deep **ALL76101** 10" Wide x 7-1/4" Deep

Replacement Components

ALL99175 J-Bolts with nuts 1pr

ALL99177 Hold Down Strap for ALL76100 ALL99176 Hold Down Strap for ALL76101

Bolt-On Battery Boxes

Battery box has multiple 1/2 mounting holes to bolt box directly to the frame rail, inner fender or firewall. Box can also be fastened to round tubing using clamp-on ballast brackets. Constructed of 13 gauge steel, measures 11" wide x 7" deep and includes 3/8" battery hold down hardware.

ALL76102 Clear Zinc **ALL76103** Black

Stainless Steel Drop-Out Battery Box ALL76105

The perfect battery box where battery mounts under floor. Eases battery service and replacement. Box is 10-1/2" wide x 7" deep x 9-1/2" tall and will accept most standard batteries.



Optima ALL76107

Aluminum hold down kit provides an attractive option for keeping Optima 34/78 series batteries in place. Battery not included.

Plastic Battery Box

ALL76099

Two-piece battery box fits up to group 27 size batteries and includes nylon strap with plastic mounting brackets. Box may be bolted through the bottom for more permanent mounting. Cover is designed with quick lock snaps to keep cover securely in place. Outside box dimensions 16-1/8" x 9-5/8" x 10-7/8" tall. Inside dimensions 12-3/4" x 7-1/4" x 10" tall.

Battery Cable Kits

Kits have everything needed to connect a top post style battery to starter and include fine stranded, rope lay copper cable for best current carrying capabilities. Kits are offered with traditional red and black cables or all black cables.

Single Battery Kits Include:

- •15' Positive Battery Cable
- •2' Negative Battery Cable
- •1 Pair Battery Terminals
- •8 Pcs. Ring Terminals 4) 5/16" & 4) 3/8"
- •8 Pcs. Heat Shrink Tubing

ALL76110...... 2 Gauge Cable Kit With Red And Black Cables ALL76111 2 Gauge Cable Kit With All Black Cables ALL76114..... 4 Gauge Cable Kit With Red And Black Cables ALL76115 4 Gauge Cable Kit With All Black Cables

ALL76110

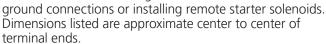
Dual Battery Kits Include:

- •25' Positive Battery Cable
- •8' Negative Battery Cable
- •2 Pair Battery Terminals
- •14 Pcs. Ring Terminals 7) 5/16" & 7) 3/8"
- •14 Pcs. Heat Shrink Tubing

ALL76112...... 2 Gauge Cable Kit With Red And Black Cables

Battery Cables

Pre-made black cables are built using PVC insulated 4 gauge copper stranded wire and include ring terminals on each end with 3/8" mounting holes. Cables are ideal for adding additional



ALL76341-10 10" **ALL76341-15** 15" ALL76341-20 20" ALL76341-25 25" ALL76341-35 35" ALL76341-40..... 40"

Ground Straps

The number one problem with electrical systems is often related to poor

ground connections. Straps are similar to OE applications which is perfect for various 6 or 12- volt grounding applications. Flexible, braided copper 12 gauge ground straps have non-insulated ring terminals on each end.

Ground Straps with 1/4" Ring Terminals:

ALL76328-6	6"
ALL76328-9	9"
ALL76328-12	12"
ALL76328-18	18"
A1176229 24	24"

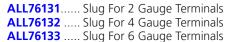
Ground Straps with 3/8" Ring Terminals:

ALL76330-6	6"
ALL76330-9	9"
ALL76330-12	12′
ALL76330-18	18
ALL76330-24	24



Solder Slugs

Use solder slugs to secure ring terminal ends to battery cable. Individual pieces are the correct amount of solder to be used for each size of cable. Package of 10.





NEW SIZES

Ring Terminals

Use to repair or build custom length battery cables, or when installing a battery disconnect switch. Terminals may be crimped or soldered to wire. Sold in pairs with heat shrink sleeving for a water-proof connection.

Wire Size	5/16" Hole	3/8" Hole	1/2" Hole
2 Gauge	ALL76116	ALL76117	ALL76128
4 Gauge	ALL76118	ALL76119	ALL76129

Impact Crimper ALL76135

Excellent for permanently crimping standard cable ends to battery cables.



Ground Stud ALL76147

Steel ground stud welds to round tubing providing a secure location for mounting a negative battery cable. Weld stud directly to the chassis or create a secure ground wire location in the foot box or engine compartment. Stud accepts battery cables with 3/8" ring terminals.



Chris Smith



Jason Smith

Gold Battery Terminals

Terminals are machined from solid brass stock, 24k gold plated for maximum conductivity and feature 5/16" fasteners to secure battery cables with ring terminal ends. Top post terminals have additional provisions for attaching accessory or ground wires for a clean appearance. Sold in pairs.

ALL76120 Top Post **ALL76122** Side Post

om solid d for I feature lattery lattery lattery lattery lattery lattery lattery lattery lattery latter lattery latter lattery latter l

Battery Terminal Covers ALL76150

Covers slip over battery cables and cover battery terminals to prevent accidental shorting. Fit most top post mount batteries. Required by many sanctioning racing bodies. Package of 2 includes one black and one red cover.



Battery Cable Boots ALL76154

Battery cable boots can be used

for a variety of applications including covering battery terminals on smaller terminal batteries and starter solenoid connections. Boots have an opening that will accept up to 2 gauge cable. Sold as a pair, one red and one black.

Battery Cable Thru Stud ALL76142

Run battery cable through firewall or any body panel safely. 3/8"-16 thread.



Mounts securely to the firewall and locks onto the wire for a waterproof and vibration proof seal.

ALL76137 2 Gauge **ALL76138** 4 Gauge

Battery Disconnect Boots

Protect the terminals on battery disconnects from being accidentally shorted.

ALL76152 Red, 2-Pack **ALL76153** Black, 2-Pack





WARNING: PROP. 65

The products on this page can expose you to lead, which is known to the State of California to cause cancer, birth defects or other reproductive harm. For more information, go to: www.P65Warnings.ca.gov



Battery Disconnect Switches

Battery disconnect switches shut down the vehicle in an emergency or secure it when not in use. Offered as a single and double pole version.

Single Pole Disconnect has two terminals and is recommended **for vehicles not using an alternator** that needs ability to be shut down in an emergency or when securing a vehicle by shutting off all power to the vehicle.

Note: When attempting to shut down a vehicle with an alternator using a single circuit battery disconnect, the alternator may continue supplying power to the vehicle ignition system, allowing vehicle to continue to run.

Double Pole Disconnect has four terminals with two separate circuits, which is recommended **for vehicles** with an alternator that need to be shut down in the event of an emergency.

Standard Duty Switch With Decal

Standard duty switch mounts in a 3/4" hole in a panel up to 1/4" thick and includes a decal to indicate on/off position. Switch has 3/8"-24 terminals and is rated at 175 amps continuous duty. Double pole switch also has #10-32 studs rated at 20 amps continuous duty.

ALL80156 Switch w/Decal (Single Pole) **ALL80157** Switch w/Decal (Double Pole)

ALL99045 Replacement Decal

Standard Duty Switch With Panel

Standard duty switch is pre-mounted in a 2-3/4" x 3-1/4" aluminum panel with bright screen printed graphics to indicate the on/off position. Switch has 3/8"-24 terminals and is rated at 175 amps continuous duty. Double pole switch also has #10-32 studs rated at 20 amps continuous duty.

ALL80158 Switch w/Panel (Single Pole) **ALL80159** Switch w/Panel (Double Pole)



ALL80158

ALL80152

ALL80153

ALL80156

Battery Disconnect Switch with Removable Kev

Battery disconnect features a removable metal key allowing vehicle to be shut down in the event of an emergency or to secure vehicle when not in use.

Disconnect is rated at 160 amps continuous duty andfeatures two 3/8"-24 terminals for installing battery cables with ring terminals. Ideal for use in street cars as a theft deterrent.

ALL80152 Switch w/Decal ALL80153 Switch w/Panel

Severe Duty Switch With Decal

Heavy duty switch mounts in a 3/4" hole in a panel up to 1/4" thick and include a decal to indicate on/off position. Switch has 1/2"-20 terminals, is rated at 300 amps continuous duty and is sealed to resist weather and help prevent internal corrosion. Double pole switch also has #10-32 studs rated at 20 amp continuous duty.

ALL80154 Switch w/Decal (Single Pole)
ALL80155 Switch w/Decal (Double Pole)
ALL99045 Replacement Decal

Battery Disconnect Panel ALL80129

Aluminum panel is pre-drilled and labeled with on/off to easily identify the position of most standard battery disconnects. Panel features four 3/16"" mounting holes and a 3/4" disconnect mounting hole.



WARNING: PROP. 65

The products on this page can expose you to lead, which is known to the State of California to cause cancer, birth defects or other reproductive harm. For more information, go to: www.P65Warnings.ca.gov



Zack VanderBeek

ALL80155



Tyler Erb



Street Performance Chevy Mini-Starter ALL80525

SB Chevy clockable starter has twelve mounting positions and is a good choice for street engines including crate motors. Starter has 1.4kw permanent magnet and weighs only 7.5 lbs. Clears most kickout oil pans and works with 153- and 168-tooth flywheels or flexplates. Use with compression ratios up to 10.5:1. Mounting bolts and shim kit included.

Replacement Parts

ALL80526 Starter Solenoid ALL80527 Bolts And Shims

Chevy Mini-Starter ALL80520

It's smaller, lighter and offers several mounting options. Perfect starter for race cars with clearance problems in the chassis or around header pipes. Chevy 153- and 168-tooth applications. Starter has 1.4kw permanent magnet, weighs just 9.6 lbs. and includes bolts and shims.

Replacement Parts

ALL80521 Starter Solenoid ALL80522 Starter Drive Assembly ALL80523 Starter Pinion ALL80524 Bolt And Shim Kit

Chevy Mini-Starter ALL80515

3HP high-torque gear reduction, block mount Chevy mini-starter. In-line mounting block will fit either 153- or 168-tooth flywheels and has rotation holes for added clearance. Mounting bolts and shim kit included.

GM LS Mini-Starter ALL80516

Block mount GM LS gear reduction mini-starter works with 168-tooth flywheels and provides increased starting performance over OE style starters. Starter features a 3-position mounting block which allows the starter motor to be rotated for additional clearance around exhaust and frame obstructions. A high torque, 3HP motor combined with 3.75:1 gear reduction is ideal for engines with up to 11:1 compression ratio.

Replacement Part

ALL80521 Starter Solenoid

Heavy Duty Bert/Brinn Starter

ALL80532

Heavy duty starter with a 3HP motor is designed to handle up to 16:1 compression engines.



Bert/Brinn Starter

ALL80530

Bert/Brinn Starter can handle up to 16:1 compression. 4.4:1 gear reduction starter has a 1.4kw motor that produces 1.9 hp and 200 ft./lbs of torque.



Starter Cover ALL26236

Protective water repellent cover for the ALL80530 Bert/Brinn style starter helps prevent dirt and water from entering starter motor causing premature

damage to starter. Nylon cover features an elastic band to fit tightly around starter body and a terminal window with openings for solenoid connections.

Universal Heat Wrap ALL34238

Heat resistant material measures 7" x 22", making it ideal for wrapping starter motor, or other components that are close to high heat areas. Wrap features a refl

high heat areas. Wrap features a reflective material on one side to protect against radiant heat and includes two 24" long stainless steel tie wraps for securing material.



Ford-style solenoid is perfect for use with high torque racing starters. Flat base eases mounting, and a remote under-hood starter switch or timing light hook-up can be easily adapted. Solenoid is offered separately, or may be ordered with i

offered separately, or may be ordered with installation kit (ALL76202) that includes wiring, terminals and hardware.

Solenoid And Installation Kit

Relocate starter solenoid away from direct engine heat to provide easy access and eliminate hot start problems common on General Motors vehicles. An under hood starter switch can also be added. Includes standard duty, Ford-style solenoid, mounting screws, terminals and wiring kit

Related Part

ALL76201 Installation Kit Only

Solenoid Jumper Wires

Jumper wire completes the circuit to the starter solenoid when using remote mounted solenoids such as ALL76203.

ALL76208 Jumper Wire With Spade Terminal **ALL76209** Jumper Wire With Ring Terminal





Electrical Outlets

Universal outlets provide remote 110V connection when powering block heaters, tank heaters or other accessories



mounted in a race car. Outlets accept standard three prong extension cords and mount directly into decking or to a chassis mounted bracket. ALL76432 and ALL76436 outlet kits are prewired with 5 feet of 14 AWG wiring.

ALL76430 Outlet

ALL76432 Outlet w/Wiring ALL76434 Covered Outlet

ALL76436 Covered Outlet w/Wiring



Brackets For Electrical Outlet And Quick Disconnect

Steel bracket mounts to the chassis, providing a single convenient location to install an electrical outlet and a battery quick disconnect

(ALL76320).

ALL60352 Weld-On Bracket ALL60353 Bolt-On Bracket



Electrical Connectors Sold Separately



Battery Ouick Disconnects

Disconnects provide a connection for battery charging,

or for guick battery changes during a race.

Prevent accidental reverse polarity. Choose from 50 or 175 amp ratings. Sold in pairs and include cable terminals.

ALL76320 50 Amp Grav Disconnects, 1 Pair ALL76322 175 Amp Red Disconnects, 1 Pair

Replacement Parts

ALL76321 6 Gauge Terminals For ALL76320, 1 Pair ALL76323 2 Gauge Terminals For ALL76322, 1 Pair

Related Items

ALL76133 Solder Slugs For 6 Gauge Terminals 10pk ALL76131..... Slug For 2 Gauge Terminals

Bracket For Quick Disconnects ALL60350

Steel bracket mounts battery disconnect (ALL76320) to the bend on the underside of deck panels found on Late Models and Modifieds.



Quick Disconnect Covers

Covers install over the end of the quick disconnects to help prevent dirt and debris from entering the

connections. Covers have a built in lanyard to keep the cover close to connector and for easy assembly.

ALL76324 Cover For 50 Amp Quick Disconnect ALL76325 Cover For 175 Amp Quick Disconnect

Remote Starter Button

ALL76206

Kit includes a low profile, steel cased foot pedal with 8' cord and assorted wire ends to work with many applications. Provides hands free engine cranking when adjusting valves.



Quick Connect Battery Charging Posts

Two-piece, color-coded connectors make safe, out-of-car connection to battery charger guick and easy. Female ends have 1/2"-20 threaded studs that connect to battery cables and pass through a 5/8" hole in a panel up to 1/8" thick. Male ends of connectors fit on battery charger cables. Shafts are tapered for tight, secure connections.

ALL76300 Red **ALL76310** Black

ALL76301 Red Female Connector Only ALL76302 Red Male Connector Only ALL76311 Black Female Connector Only ALL76312 Black Male Connector Only

Battery Charging Posts

Mount remote charging posts through a body panel for access to battery terminals and guick, easy, battery charging. Posts have 3/8" studs and have color coded caps for safety. Posts require a 1.25" mounting hole.

ALL76139 Kit (1 Red And 1 Black) ALL76140 Red Post Only ALL76141..... Black Post Only

Charging Post Bracket ALL60064

Securely mount Allstar charging posts on vehicles where battery is not easily accessible. Pre-drilled holes allow quick mounting to frame or body. Double-D hole design positions posts close together, but provides enough room for charging or jumper cable clamps. Charging posts sold separately. (ALL76140 and ALL76141).

GM Single Wire Alternators

Completely remanufactured GM Delco single wire alternators are easily hooked-up. Housings are natural finish aluminum. Choose from 63 or 80 amp capacities.

ALL80500..... 63 Amp, Full Size, 10.3 Lbs. ALL80501 80 Amp, Compact Size, 9 Lbs.

GM Single Wire Chrome Alternator ALL80505

Chrome finish, single wire GM alternator with aluminum housing has a 100 amp capacity.



ALL80500



Gauge Panels



Gauge panels are completely assembled, pre-wired, and include lighted mechanical gauges, warning indicator lights with senders to alert you of problems, detailed instructions and installation template. Select from panels fitted with Allstar, Auto Meter Sport-Comp or Pro-Comp liquid-filled 2-5/8" gauges. Panels are available in two, three, or four gauge configurations.

- •Two-Gauge Panels Are 4-1/2" Tall x 7-1/4" Long. Gauges: Oil Pressure And Water Temperature
- •Three-Gauge Panels Are 4-1/2" Tall x 10-1/2" Long. Gauges: Oil Pressure, Water Temperature And Oil Temperature Or Fuel Pressure
 •Four-Gauge Panels Are 4-1/2" Tall x 13-3/4" Long. Gauges: Oil Pres-

sure, Water Temperature, Oil Temperature And Fuel Pressure.

Note: Fuel pressure isolator such as Autometer ATM5282 or Mallory MAL29806 is always recommended when mounting a fuel pressure gauge inside vehicle.

	Timenaca when mounting a raci pressure gauge inside verileie.
Part No.	Description
Allstar	
ALL80090	2 Gauge Panel OP/WT
ALL80091	3 Gauge Panel OP/WT/OT
ALL80092	3 Gauge Panel OP/WT/FP
ALL80093	4 Gauge Panel OP/WT/OT/FP
Auto Met	er Sport Comp
ALL80110	2-Gauge (OP/WT)
ALL80112	3-Gauge (OP/WT/OT)
ALL80113	3-Gauge (OP/WT/FP)
ALL80114	4-Gauge (OP/WT/OT/FP)
Auto Met	er Pro-Comp (Liquid Filled)
ALL80120	2-Gauge (OP/WT)
ALL80122	3-Gauge (OP/WT/OT)
ALL80123	3-Gauge (OP/WT/FP)
Replacem	ent Parts
ALL80134	Auto Meter Fuel Pressure Gauge Sport Comp 15 PSI
ALL80136	Auto Meter Fuel Pressure Gauge Pro Comp 15 PSI
ALL80125	2-Gauge Mounting Panel, 4-1/2" x 7-1/4" (OP/WT)
ALL80126	3-Gauge Mounting Panel, 4-1/2" x 10-1/2" (OP/WT/OT)
ALL80127	3-Gauge Mounting Panel, 4-1/2" x 10-1/2" (OP/WT/FP)
ALL80128	4-Gauge Mounting Panel, 4-1/2" x 13-3/4" (OP/WT/OT/FP)

Mechanical Gauges

Allstar Performance 2-5/8" mechanical gauges feature a full 270° sweeping needle, silver faced background, black



ALL80095 Oil Pressure Gauge 0-100 PSI
ALL80096 Water Temperature Gauge 140-280°F
ALL80097 Oil Temperature Gauge 140-340°F
ALL80098 Fuel Pressure Gauge 0-15 PSI
ALL80099 Volt Gauge 8-18V
ALL99145 Replacement Bulb, Socket And Pigtail

LED Bulbs For Gauge Panels

ALL99147

LED bulbs offer a brighter lighting solution and will hold up much longer than standard incandescent bulbs on 16 volt systems. Bulbs replace standard 53 bulbs and fit gauge backlight and warning light sockets on all Allstar gauge panels. Package of 2.

Warning Lights

Warning lights or indicator lights inform the driver of a possible problem before major damage occurs when used with temperature or pressure switches. Lights snap into a 3/4" hole in material up to .065" thick. Lights have standard male blade electrical connections and are designed for 12V systems.

ALL99062 Amber Light ALL99063 Blue Light ALL99064 Green Light ALL99065 Red Light

Temperature Switches

Temperature switches are commonly used to turn on indicator lights to warn the driver of a possible overheating condition. Switches complete a circuit to ground when the pre-set temperature is reached so they may also be used to control a relay for electric fans. Switches have male 1/2"-14NPT threads and a standard male blade electrical connector.

ALL99057 235°F **ALL99056** 280°F

Pressure Switches

Pressure switches are commonly used to turn on indicator lights warning of a

low pressure condition to help prevent engine damage. Switches complete a circuit to ground until the pre-set pressure is reached. Switches have male 1/8"-27NPT threads and a standard male blade electrical connector.

ALL99058 4 PSI **ALL99059** 20 PSI

Water Pressure Warning Kit ALL80250

Warning kit senses pressure in the cooling system and alerts driver of a problem when coolant pressure drops below 4 PSI. In the event of coolant loss (i.e. blown radiator hose), the temperature gauge probe is no longer surrounded by coolant to detect the engine temperature. This will lead to a false temperature gauge reading and major engine damage.

Tel-Tac Mount ALL81332

Aluminum mount accepts Tel-Tac digital tachometers and recesses into a dash for clean finished look. Mount attaches to backside of dash with quick turn fasteners (buttons sold separately) for simple tachometer removal and installation.





Switch Panels

Designed with the racer in mind, panels feature well marked switches and indicator lights. Units are completely wired for easy installation and include detailed instructions. Choose from panels with standard or weatherproof switches.

Switch Panels With Standard Switches









ALL80146

ALL80140 ALL80150

ALL80140 Panel Without Light ALL80141 Panel With Flip-Up Cover ALL80142 Panel With Light ALL80146 Panel With Two Switches ALL80150 Magneto Ignition Panel

Switch Panels With Weatherproof Switches







ALL80160 Panel Without Light

ALL80162 Switch Panel, One Switch, Panel With Light ALL80164 Switch Panel, Two Switch, Panel With Two Lights

Weatherproof Switch Panel

ALL80165

Compact three switch panel has sealed weatherproof toggle switches for use in open cockpit vehicles or when exposed to harsh conditions. Panel mea-



sures 2-1/2" tall x 4-5/8" wide and includes one momentary start switch, one ignition switch and one accessory switch. Switches are rated up to 20 amps and each circuit includes 60" of 14AWG wire for easy connections.

Fused Switch Panel

ALL80138

Universal 4" x 7" switch panel includes one momentary start switch, one fused ignition switch and four fused accessory switches. Ideal for many



motorsports applications, this panel features separately fused and switched circuits for a variety of uses including electric fuel pumps, water pumps, cooling fans, brake duct fans, and lighting. Individual circuits are rated up to 20 amps and include pre-terminated pigtails for easy connection.

Spiral Corded Momentary Buttons

Buttons are designed for fast, consistent and reliable trans-brake release. Sealed spiral cord leads are ideal for steering wheel mounting or into a 5/8" hole. Momentary buttons may also be used in



ALL80176 ALL80177

many other applications such as nitrous and line lock systems. 18" spiral cords stretch to approximately 5'.

ALL80180 Cord With Small Green Button **ALL80181** Cord With Large Red Button

Heavy Duty Toggle Switches

On/off, two-position toggle switches are used in Allstar Performance ignition panels. Rated up to 20 amps.

ALL80175 Standard Switch ALL80176 Weatherproof Switch ALL80177 Weatherproof Switch Momentary Start/Return To Off

Toggle Extensions

Toggle extensions increase the length of toggle switches in Allstar switch panels and other switches with a standard type end. Push-on extensions are 1-7/8" long, offered in red or black. Package of 2.

ALL80167 Red **ALL80168** Black

Toggle Switch Cover ALL99068

Cover fastens onto the front of most standard-length toggle switches to help seal out the elements. Cover features a molded-in brass nut to secure tight to the switch.

Starter Button ALL99069

This same momentary-on starter button used in Allstar Performance switch panels is a good alternative to a key style starter switch. Button mounts in a 5/8" hole and has #8 terminal mounting screws. Rubber boot threads on after installation to help seal out the elements.

Remote Starter Button Shroud Kits

Kit mounts a remote starter button directly to chassis tubing. Kit includes a shroud to help protect against accidental activation, tab, and starter button.

ALL60360 Welded Kit ALL60361 Unwelded Kit

Indicator Lights

Indicator lights are used in Allstar
Performance ignition panels to indicate
when the ignition or an accessory is on. Lights may
be used in a variety of other applications as needed. Lights
snap into 1/2" holes in up to .065" thick material, have ring
terminal connectors and are designed for 12V systems.

ALL99066 Red Indicator Light ALL99146 Green Indicator Light



Street/Strip Distributors

These distributors are a great choice for street/strip applications. A performance distributor combined with the added benefit of an adjustable vacuum advance for street use. Simple three wire connection only requires a 12V power source and an external coil such as the ALL81232, which is designed specifically for ready to install distributors. The small bodied design is perfect for early muscle cars where firewall clearance is often a concern. CNC-machined 6061-T6 aluminum housing has a sealed upper support bearing and an extra-long lower bronze bushing for smooth operation and accurate timing at higher RPMs. Distributors include a molded cap and rotor with brass and stainless steel contacts, a vacuum advance lock out, a mechanical curve kit with advance springs and stop bushings, spark plug wire retainer cap with screws and instructions.

ALL81222 Chevrolet V8* **ALL81240** Ford V8 221-302 **ALL81242** Ford V8 351W

ALL81244 Ford 351C, 400C/M, 429-460

ALL81252 Ford V8 332-428 FE **ALL81254** Pontiac V8 326-455

*Excluding 348-409 CID

Note: Distributors include melonized drive gears compatible with most flat tappet or hydraulic roller camshafts. If used with a mechanical roller camshaft, a bronze or other compatible gear should be used as recommended by cam manufacturer.

Replacement Parts







ALL81224 Cap And Retainer (Chevrolet)

ALL81226 Cap And Retainer (Ford)

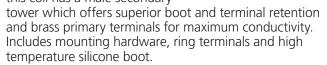
ALL81225 Rotor

ALL81228 Magnetic Pick-Up

ALL81229 Complete Module Assembly Chevrolet **ALL81227** Complete Module Assembly Ford

High Output Coil ALL81232

High output coil is specifically designed for use with the high output inductive storage ignition module found in Allstar Performance Street/Strip series distributors. Delivering up to 40,000 volts, this coil has a male secondary



High Performance Distributors For Use With Ignition Box

This high performance distributor is an excellent choice for many types of motorsports. Requires an aftermarket ignition box (such as an MSD, Accel, Crane or Mallory) and an external coil such as ALL81230. Housing is CNC-machined 6061-T6 aluminum with an upper support bearing and an extra-long lower bronze bushing for smooth operation and accurate timing at higher RPMs. Distributor includes a molded cap and rotor with brass and stainless steel contacts, a mechanical curve kit with advance springs and stop bushings, manifold gasket, housing O-rings, spark plug wire retainer cap with screws and instructions.

ALL81220 Chevrolet V8*

ALL81216 Chevrolet V8* w/Vacuum Advance **ALL81221** Chevrolet V8* w/Adjustable Collar

ALL81218 Chevrolet V8* w/Adjustable Collar, Dual Pick-Up

ALL81246 Ford V8 221-302 **ALL81248** Ford V8 351W

ALL81250 Ford V8 351C, 400C/M, 429-460

*Excluding 348-409 CID

Note: Distributors include melonized drive gears compatible with most flat tappet or hydraulic roller camshafts. If used with a mechanical roller camshaft, a bronze or other compatible gear should be used as recommended by cam manufacturer.

Replacement Parts







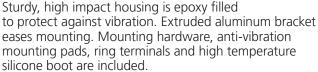
ALL81224 Cap And Retainer (Chevrolet)
ALL81226 Cap And Retainer (Ford)

ALL81225 Rotor

ALL81228 Magnetic Pick-Up

CD Ignition Coil ALL81230

High output ignition coil is specifically designed for use with capacitive discharge ignition systems. 40,000 volt coil is recommended for use with Allstar Performance HP series distributors.





Chevy HEI Performance Distributors

Distributors have high output coils and adjustable vacuum advances, perfect for upgrading stock HEI distributors for higher RPM. Fit small and big block Chevy (except 348 and 409). Housings are CNC-machined 6061-T6 aluminum with an upper support bearing to provide accurate timing at higher RPM. Include snap-on spark plug wire retainer and instructions.

ALL81200 Distributor With Red Cap ALL81202 Distributor With Black Cap

Replacement Parts









ALL81204 ALL81204 Distributor Cap, Red ALL81205 Distributor Cap, Black ALL81206 Distributor Rotor

ALL81207 Coil

ALL81208 Module ALL81210 Coil Cover, Red

ALL81211 Coil Cover, Black ALL81212 Wire Retainer, Red ALL81213 Wire Retainer, Black





ALL81208

ALL81214

ALL81200

HEI Connectors

The proper connector when repairing or wiring HEI ignition systems.

Connectors have a built-in retaining clip same as originals to secure connector to ignition cap. The included pigtail wires are also the correct gauge for easy installation.

ALL81214 12V Ignition Connector ALL81215 Tach Connector

HEI Advance Curve Kit ALL81300

Advance kit fits all '74-79 GM HEI distributors except those that are computer controlled. Includes two weights, center plate, three sets of color-coded springs, two pairs of nylon bushings and complete instructions.

Jeep/AMC 6 Cylinder Performance **Distributor ALL81255**

Replace troublesome point or OE computer controlled distributors in most 3.8L and 4.2L engines with a more reliable electronic ignition distributor, plus an adjustable vacuum advance. Three wire connection requires only a 12v power source and an external coil such as the ALL81232 or ALL81234. Distributors include a molded cap and rotor with brass and stainless steel contacts, a vacuum advance lock out, a mechanical curve kit with advance springs and stop bushings, spark plug wire retainer and installation instructions.

Low Profile Chevy Distributor Hold Down ALL27505

Strong, steel hold-down clamp with gold iridite finish fits small and big block Chevy V8 and 90° Chevy V6. Flat design provides extra distributor clearance and easy access to hold down fastener. Stud and nut included.

Chevy Distributor Hold Down

Aluminum hold-down keeps distributor secured at high RPM. Fits small or big block Chevy V8 and 90° Chevy V6. Stainless steel stud, nut and washer are included. Choose blue, clear or red anodized.

ALL27502 Blue Chevy Distributor Hold Down ALL27503 Clear Chevy Distributor Hold Down ALL27504 Red Chevy Distributor Hold Down

Chevy Distributor/Magneto Hold Down ALL27500

Aluminum hold down fits most aftermarket distributors and magnetos. An Allen head bolt prevents distributor from turning in the clamp so distributor can be removed and reinstalled without resetting the timing. Fits all Chevy V8 except 348-409. Will not fit Mallory magnetos.

Iron Distributor Gears

Melonized or Melonite coated gears are direct replacement for Allstar Performance and other stock and performance distributors. Iron gears are suitable for applications using high volume oil pumps.

ALL81308 0.491" Dia. Shaft Chevy V8 ALL81309 0.500" Dia. Shaft Chevy V8

Bronze Distributor Gears

When installing a steel billet roller camshaft, a bronze distributor gear must be installed in place of the original cast iron gear. Gears made of premium aluminum bronze offer high strength to withstand the stresses created by high pressure oil pumps. Roll pins are included.

ALL81310 0.491" Dia. Shaft ALL81311 0.500" Dia. Shaft

ALL81315 Replacement Distributor Gear Roll Pin



Steve Dorer

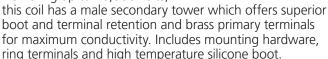


CD Ignition Coil ALL81230

High output ignition coil is specifically designed for use with capacitive discharge ignition systems. 40,000 volt coil is recommended for use with Allstar Performance HP series distributors. Sturdy, high impact housing is epoxy filled to protect against vibration. Extruded aluminum bracket eases mounting. Mounting hardware, anti-vibration mounting pads, ring terminals and high temperature silicone boot are included.

High Output Coil ALL81232

High output coil is specifically designed for use with the high output inductive storage ignition module found in Allstar Performance Street/Strip series distributors. Delivering up to 40,000 volts,



Canister Style Ignition Coil ALL81234

45,000 volt, oil filled coil for electronic breakerless ignitions has low primary resistance and 112:1 turn ratio for improved throttle response and more power at higher rpms. Coil fits all standard O.E.M. brackets or Allstar ALL81236 coil bracket.

Coil Mounting Bracket ALL81324

Aluminum canister style coil mounting bracket features a flat mount for securing to a flat panel or firewall. Bracket includes a tension screw to secure coil in bracket before mounting.



Universal Coil Mounting Bracket ALL81326

Universal bracket is an OE style bracket that mounts canister style coils to some popular V8 intake manifolds or may be used to mount coil to a flat panel or firewall. Bracket includes a tension screw to secure coil in bracket before mounting.



LS Ignition Coils



Direct replacement 40,000V coils are a good choice when upgrading the OE ignition system in high performance applications or when power adders are used. Sold each.

ALL81400...... 1997-05 LS1/LS6 (Delco D580)

ALL81401....... 1999-07 4.8/5.3/6.0L Truck (Round Style Delco D585) **ALL81402**...... 1999-07 4.8/5.3/6.0L Truck (Square Style Delco

D581)

ALL81403.......2005-13 4.8/5.3/6.0/6.2/7.0L (Delco D510C/D514A)

LS Coil Mounting Brackets **ALL26212** OE style steel mounting brackets fit OE and fabricated valve covers with factory mounting bosses and have a black epoxy coated finish. Brackets are

Remote Mount LS Coil Brackets

for use with Delco D580 Coils (ALL81400).

Designed for remote mounting LS Coils. Black anodized billet aluminum brackets come complete with stainless hardware and standoffs

for easy removal. ALL26216 Fit Delco D580, LS1/LS6 Coils (ALL81400) ALL26217 Fit Delco D581 and D510C, LS2,LS3,LS7 Coils (ALL81402 & ALL81403)

MSD/FAST Ignition Box Mount

ALL81330

Box mount provides a quick release method for replacing MSD or FAST ignition boxes with 7-1/2" x 3-1/2" or 4-1/8' x 6-1/2" center to center mounting dimensions. Kit includes aluminum box mount, (4) quick turn fasteners, springs and 1/8" aluminum rivets.





Spark Plug Index Shims

Stackable shims index spark plugs at 30° intervals up to 360°, properly positioning ground strap in cylinder head for increased power and clearance between spark plug and piston. Shims are intended for use with 14mm flat seat spark plugs only. Package of 24 shims seat spark plugs only. Package of 24 shims



contains 12 silver 60°, 12 black 90°, detailed instructions and dial chart.

ALL96505 Shim Kit, Standard O.D. (.800") **ALL96506** Shim Kit, Small O.D. (.720")*

 ${}^{\star}{\rm Shims}$ are designed for close tolerance spark plug pockets such as those on ALL-PRO cylinder heads.

Spark Plug Indexing Tool ALL96510

Indexing positions the ground strap of the spark plug properly for best piston dome



clearance and un-shrouds the electrode for a more even burn and possible gains of 5-15 horsepower. Works with flat gasket or taper seat 14mm spark plugs. Includes instructions.

Spark Plug Gap Tool ALL96515

Tool properly cradles the spark plug to consistently set plug gaps using a standard feeler gauge. Insert plug into holder, place desired thickness of



feeler gauge between ground strap and electrode then gently turn the knob until feeler gauge is snug.

Spark Plug Gap Tool Kit ALL96516

Spark plug gap tool quickly and accurately gaps 14mm threaded spark plugs. Thread spark plug into tool, place the correct size feeler gauge beneath the ground strap then tighten knob to set plug gap. Includes 17 different feeler gauge sizes .010" thru .035".





Coil Wire Kits

Kit includes 36" of 8mm spiral core race wire, ends, connectors, and wire stripping/crimp tool.

ALL81380 Kit Without Sleeving ALL81381 Kit With Sleeving



Spark Plug Race Wire Sets

Custom length SBC wire sets feature 8mm spiral core race wire with pre-terminated ends and universal coil wire. Sets feature shrink sleeved ends and cylinder identification numbers.



ALL81365 Set Without Sleeving, Under Header ALL81366 Set Without Sleeving, Over Valve Cover ALL81370 Set With Sleeving, Under Header ALL81371 Set With Sleeving, Over Valve Cover

Universal Spark Plug Race Wire Sets

Universal length 8mm spiral core wire sets include a non-terminated end, ends and boots for a build to length option.

ALL81360 Set With 90° HEI Ends ALL81361 Set With 135° HEI Ends

Spark Plug Boot Sleeves

Fiberglass braided sleeves are heat resistant to protect spark plug boots from header heat up to 1,200°F. 7-1/2" long sleeves slide over a variety of boots.

ALL34272 Natural, 8-Pack **ALL34273** Natural, 2-Pack **ALL34274** Black, 8-Pack **ALL34275** Black, 2-Pack



SB Chevy Spark Plug Wire Loom Set ALL81340

Polished aluminum spark plug wire loom fits wires up to 9.5mm. Includes mounting hardware. Engines with center bolt style valve covers require ALL81341 mounting kit. Package of 2.

Note: may not clear oil dipstick or exhaust manifolds on some later model engines with "log" style manifolds.

Related Item

ALL81341 Mounting Kit For Centerbolt Covers

Spark Plug Wire Separator Set ALL81345

Black plastic set will fit up to 9mm wires. Includes two of each 2-, 3- and 4-hole separators.



1887 7474

Spark Plug Wire Retainer ALL81350

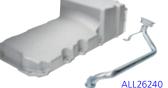
No more melted plug wires from hot exhaust. These aluminum retainers will neatly mount separated 4-wire sets to the front or rear of cylinder head. Package of 2.





LS Oil Pan Kits

Oil pan kits ease the installation of LS series engines into early production vehicles by providing additional clearance between the oil pan and frame crossmember.



Kits include oil pan, pick-up tube,

gaskets and mounting hardware required for installation. Note: These kits may not fit all applications, additional motor mount adapters and possible frame modification may be required for installation in some vehicles.

Note: These kits may not fit all applications, additional motor mount adapters and possible frame modification may be required for installation in some vehicles.

ALL26240 Cast Aluminum ALL26241 Cast Aluminum Black

6 Qt. Claimer Oil Pans **And Pick-Ups**

Small block Chevy pans have a 6 quart capacity and are 7" deep. Two swinging trap doors and a built in baffle provide consistent oil control. Oil pan fits pre-'86 blocks with 2-pc rear main

ALL26132 seal.

ALL26132 L.H. (Driver's Side) Dipstick ALL26133 R.H. (Passenger's Side) Dipstick

ALL26134 Pick-Up For Use With Standard Volume Pumps **ALL26135** Pick-Up For Use With High Volume Pumps

Magnetic Drain Plug ALL87040

Replacement plug for standard 1/2"-20 drain holes has a magnetic end to capture small particles in oil or to help identify a problem early.



Engine Diaper ALL69011

Engine diaper will help contain engine oil and fragments if an engine failure occurs. Increase safety and reduce the chance of control loss due to

debris on the racing surface. Diaper wraps around oil pan and secures to header bolts. Diaper is NHRA approved

but is not designed for vehicles that require SFI approved diapers. Diaper features a sewnin, non-replaceable oil absorbent pad and is 23" long x 12-1/2" high x 12" wide.

Replacement Parts

ALL99043 Replacement Tabs, 4-Pack ALL99347 Replacement Buckle, 1 Set **ALL69013** Engine Diaper Pad, 22" x 30"



SB Chevy Rear Main Seal Adapters

Billet aluminum adapter allows installation of a two-piece style crankshaft seal and early (pre-1986)



and newer SB Chevy (pre-LS) engine. Adapters include mounting hardware. Alignment tool ALL26127 (sold separately), is recommended to ensure proper installation and centering of adapter plate.

ALL26125 Seal Adapter For Early (Pre-'86) Oil Pan ALL26126 Seal Adapter For Late (86'-Up) Oil Pan

ALL26127 Alignment Tool

Balancing Plate ALL26120

Plate is installed between crankshaft flange and the flywheel allowing a popular internally balanced Chevy 350 flywheel to be used with an externally

balanced 400 crankshaft. Note: These are not designed to be used with an automatic transmission flexplate.

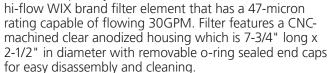
Plastigage® Kit ALL96475

Plastigage strings are a simple and accurate way to verify crankshaft, main and rod bearing clearances. Kit includes two green .001" to .003" and one red .002" to .006" (12" long strings) individually

packaged inside calibrated sleeves. Detailed instructions are included.

In-Line Oil Filter

Aluminum in-line oil filter includes a specially made



Note: Not recommended for dirt racing applications, the high flow capacity of this filter will not stop small contaminants found in dirt racing.

ALL92040 -16AN Fittings **ALL92041** -12AN Fittings

Related Part

ALL92043 Replacement Filter Element

Oil Filter Cutter ALL10538

Tool removes the outer shell of most spin-on style engine oil filters to inspect the filter material for contamination or debris.







Oil Filter Adapters

Oil filter adapters are OE style replacement mounts for securing oil filter to engine block or oil pan when rebuilding or replacing an engine

ALL92000 1968-96 SB Chevy Including LT1
and 1968-90 Gen IV BB Chevy Engines, ALL92004
Aluminum adapter with bypass valve
bolts to block and has 13/16"-16 threads to
accept oil filter.

ALI 92000

ALL92001 Bolt kit for ALL92000

ALL92004..... Gen V and VI 1991-Up BB Chevy Engines, Adapter threads into block with 1"-12 threads and has 13/16"-16 threads to accept oil filter.

ALL92005 1997-2017 LS Series Engines Hex body adapter

threads into oil pan. **ALL92006** 1997-2017 LS Series Engines, Round body with

internal hex adapter threads into oil pan. **ALL92003** Fits Most SB Ford 302-351W Engines, Adapter

threads into block with 1-1/16"-12 threads and has 3/4"-16 threads to accept oil filter.

Chevy Billet Oil Filter Adapter

ALL92020

Billet aluminum adapter replaces the stock cast aluminum adapter and eliminates the bypass found in OE adapters. Adapter fits most 1968-96 SB Chevy and 1968-90 Gen IV BB Chevy engines, has 13/16-16 threads for spin-on style oil filters and includes mounting hardware.

Chevy Oil Filter Sandwich Adapter ALL92022

Aluminum adapter installs in place of the OE style oil filter adapter, eliminating the bypass found in OE adapter and providing 1/2"

NPT inlet and outlet ports for connecting an external oil cooler. Adapter lowers the oil filter 1-1/2" and directs oil first to the oil cooler and then through the filter before entering the engine. Adapter fits most 1968-96 SB Chevy and 1968-90 Gen IV BB Chevy engines, has 13/16"-16 threads for spin-on style oil filters and includes mounting hardware and o-rings.

Chevy Remote Oil Filter Adapter ALL92025

Aluminum adapter installs in place of the OE style oil filter adapter, providing 1/2"NPT inlet

and outlet ports for connecting to an external oil filter mount. Adapter is commonly used when header clearance does not allow easy access to block mounted oil filter. Adapter fits most 1968-96 SB Chevy and 1968-90 Gen IV BB Chevy engines and includes mounting hardware and O-rings.

Remote Oil Filter Mount Kit ALL92027

Kit includes a machined billet aluminum mount for relocating an oil filter to a location that is easier to access and protected from possible damage. Mount



features top mounted -12 ORB ports for easy connection and hose routing, a 1/8" NPT pressure port and multiple oil filter fittings. Fittings included are 3/4"-16, 13/16"-16, and 1-1/8"-16 for most popular 3-5/8" O.D. oil filters.

Aluminum Oil Inlet Fittings

Aluminum fittings adapt NPT to the AN threads commonly used when connecting oil lines and for other applications. Length stated is overall length. ALL90045 features two additional 1/8"NPT ports commonly used when plumbing valve spring oilers.

ALL90048..... 3/8"NPT to -10AN, 3" Long ALL90043..... 1/2"NPT to -10AN, 3" Long ALL90044..... 1/2"NPT to -12AN, 3" Long ALL90045..... 1/2"NPT to -12AN, 3-1/2" Long (With 1/8"NPT Ports)

ALL90044 ALL90045

Inline Oil Temperature Tees

Install in the oil return line (pumpto-tank) to adapt a probe for an oil temperature gauge. All inline tees have 1/2"NPT threads for probe fittings and 1/4" holes for mounting.

ALL90040..... -10AN **ALL90041**..... -12AN **ALL90042**.... -16AN

Reducer Fittings

Reducer fittings are an economical way to reduce the male AN thread size on items such as oil coolers and inline temperature T-fittings.

ALL90075 -10AN To -8AN **ALL90076** -12AN To -10AN

1/8"NPT To 4AN Tall Fittings

Steel fittings allow easier access when plumbing oil pressure lines on many engine blocks.

ALL50004..... Straight **ALL50021**..... 90°





Δ1190071

Engine Oil Pressure Primer Tank

ALL10535

Primer tank supplies initial oil to the oil pump in engines equipped with a crank driven oil pump. Fill primer tank with engine oil then apply compressed air to force the fluid throughout the engine via the oil pressure sender/switch port to pre-lube the entire engine, including the oil pump. Tank features fill cap with safety pressure release slot (sealed by O-ring), an easy to read pressure gauge and a quarter turn on/off supply valve. The oil supply line is a durable 90" long steel braided hose with -4AN ends and includes a fitting with male 1/8"-

SB Chevy Oil Restrictors

Oil restrictors reduce the amount of oil flow to the top of the engine, reducing the risk of evacuating the oil pan in continuous high rpm engines while allowing more oil to be directed to the main and rod bearings. Restrictors have a .055" I.D. hole and include two extra O-ring seals. Package of 2.

27NPT threads. Adapter fittings sold separately.

ALL90070 SB/BB Chevy, Aluminum With Hex Head ALL90071 SB Chevy Bowtie Block, Steel With Allen Head

Note: Not recommended for hydraulic lifter engines.

Dart/Chevy SHP Oil Restrictors

Oil restrictors for use in Dart SB Chevy SHP blocks are specifically designed for the priority main oil system to reduce the amount of oil flow to the top of the engine, reducing the risk of evacuating the oil pan in continuous high rpm engines. Kit includes two restrictors, an extra O-ring and detailed installation instructions.

ALL90072 Restrictor Kit With .090" I.D. Hole ALL90073⁺.... Restrictor Kit With .030" I.D. Hole

†Smaller port size may be modified as needed for preferred amount of oiling.

GM LS Oil Galley Plug

Galley plug commonly referred to as a "Barbell" are used by the factory to divert oil to the factory oil filter and prevent unfiltered oil from circulating through the engine. The original GM barbells are a nylon material that may become brittle over time and should be replaced when performing a rebuild or upgrades.

ALL90067 OE Style Nylon ALL90068..... Billet Aluminum

Immersion Heaters

Immersion style heater preheats oil in wet sump oil pan or dry sump tanks to reduce overall warm up time and improve lubrication during initial start up. 5/8" diameter stainless steel



sleeve inserts into pan or tank and secures with a welded on 1/2"NPT brass screw-in fitting. 120-volt operation.

ALL76415 4-3/4" Long Heater Element w/3' Long Cord. 400W **ALL76416** 7-1/2" Long Heater Element w/12" Long Cord, 250W

Heating Pads

High temperature silicone heating pads externally preheat oil in wet sump oil



pans, dry sump tanks and automatic transmission pans, reducing overall warm up time and improving lubrication during initial start up. 3" cord, 120-volt operation.

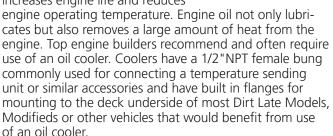
ALL76420 2"x15", Self Adhesive Pad, 200W

ALL76422 5"x7", Self Adhesive Pad, 375W **ALL76424** 6"x12", Velcro Strapped Pad For 6" O.D. Tanks, 435W

WARNING! Do not plug heater in without being installed on tank or metallic surface to absorb heat. Element heats up quickly and damage will result.

Oil Coolers - Flange Mount

Adding an oil cooler to a vehicle increases engine life and reduces



ALL30146 Cooler With -10AN Fittings, 4" x 15" x 3-1/2" Tall For Most Wet Sump Systems

ALL30145 Cooler With -12AN Fittings, 8-3/4" x 15" x 3-1/2" Tall For Most Dry Sump Systems

Oil Cooler Scoops

Scoop mounts to the deck of most race cars above the oil cooler forcing air through the oil cooler to aid cooling. Black plastic scoop has a carbon fiber look and measures 11" x 7" with a 3" tall opening and approximately a 1" mounting lip.

ALL23228 Scoop With 7" Wide Opening ALL23229 Scoop With 11" Wide Opening



Linear Engine Oil Coolers

Finned aluminum coolers have 3/4"NPT ends and T-slots for easy mounting.

ALL30142 3' **ALL30143** 4' **ALL30144** 5'



Sprint Car Dry Sump Tank Mounting Brackets

Mounting brackets are designed to mount 6" diameter tanks to the left front corner of standard small block Chevy engines. Commonly mounted with ALL38145 sprint motor plate, the upper bracket utilizes the water pump mounting holes and the lower bracket fastens to the early front engine mount mounting hole.

ALL36092 Upper Tank Mount ALL36093 Lower Tank Mount

LS Lifter Valley Covers

Billet aluminum covers come complete with stainless hardware and O-ring. Black anodized.



ALL90106..... Gen III **ALL90107**..... Gen IV/LSX

SB Chevy Lifter Valley Vents ALL90065

Lifter valley vents positively vent the crankcase and eliminate oil drain-through and windage losses. When used with valley screens, vents prevent damage from broken valvetrain compo-



nents. Vents have 1/4"NPT threads and a 9/16" hex head to ease installation. Package of 8.

Deck Mount Breather Tank ALL36105

Spun aluminum tank has a flat top and mounts on the bottom side of your deck panel. Features a bottom breather, drain petcock on the side near the bottom and a 3/4"NPT female bung near the top.



Mini Breather Tanks

Small capacity, spun aluminum tank will vent dry sump tank, transmission or rear end. Tank has a 1/4"NPT bung on bottom and a clamp style bracket for mounting to chassis tubing.

ALL36140 Tank For 1-1/2" Dia. Tubing ALL36141 Tank For To 1-3/4" Dia. Tubing ALL36142 Tank With Flat Mount ALL36103 Replacement Filter



Breather Tanks

Aluminum breather tanks are 11-1/2" x 3", include mounting bracket, clamp on breather element, drain, and one or two 3/8"NPT bung(s). ALL36109 can vent two systems. Ideal for dry sumps and rear ends.

ALL36108 Tank With One RH Bung ALL36117 Tank With One LH Bung ALL36109 Tank With Two Bungs





SB Chevy Fuel Pump Mount Plate ALL40254

O.E. style plate replaces lost or missing mounting plate required to mount mechanical style fuel pump to most small block Chevrolet engines. Clear zinc plated finish may also be painted to match original appearance. Mounting hardware included.

SB Chevy Fuel Pump Block Off Plate ALL40255

Plate covers mechanical fuel pump engine opening on most small block Chevrolets when omitting a mechanical style fuel pump. Plate is often used when converting to electric or belt driven fuel pumps. Clear zinc plated finish may also be painted.

Billet Aluminum Fuel Pump Block-Off Plates

CNC-machined billet aluminum plates cover the mechanical pump opening in the engine block and include a gasket and stainless steel fasteners.



	4		

Description	Blue	Clear	Red	Black
SB Chevy				ALL40306
BB Chevy, SB/BB Ford*, SB/BB Chrysler	ALL40303	ALL40304	ALL40305	ALL40307

*Will not fit Ford 351C, 351M-400



LS Timing Cover Conversion Kit ALL90090

LS timing cover conversion kit adapts a standard small block Ford distributor into CT525 crate and LS series engines, allowing adjustment of timing and the mechanical advance curve and also provides an alternative to installing complete computer and fuel injection systems when placing a late model LS engine into an older street performance vehicle. Enjoy the performance and durability of the GM LS series engine with the simplicity and tune-ability of a distributor and carburetor. Kit includes all internal components and new timing cover for converting LS series engines to uti-

lize a standard distributor ignition system and a carburetor

SB Chevy Timing Cover ALL90010

Excellent replacement for distorted and leaky timing covers. Cover fits most popular standard small block Chevrolets.

with a belt driven or electric fuel pump.



SB Chevy Timing Cover (BB Chevy Seal) ALL90012

Black zinc plated steel timing cover is designed for small block Chevy fitted with an aftermarket crankshaft with a BB Chevy snout.



ALL87282 BB Chevy Timing Cover Seal

Aluminum Timing Covers

Polished cast aluminum covers resist warping and leaking that is common with OE style stamped steel covers. Recessed ALL90008 mounting holes are designed for button head fasteners (ALL99390) for proper installation. Covers clear most double roller style timing chains.

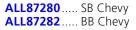
ALL90008..... SB Chevy ALL90009..... BB Chevy

Related Part

ALL99390..... Timing Cover Fasteners

Timing Cover Seals

Seal works with stamped steel or aluminum covers.





ALL90009

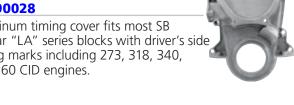
Pontiac Aluminum Timing Cover ALL90019

Cast aluminum cover with timing marks includes water pump backing plate and two coolant inserts. Fits most 1969-79 Pontiac V8 engine models including 350, 400 and 455.

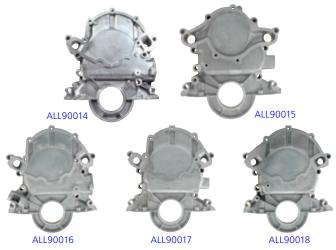


SB Mopar Timing Cover ALL90028

Aluminum timing cover fits most SB Mopar "LA" series blocks with driver's side timing marks including 273, 318, 340, and 360 CID engines.



SB Ford 302/351 **Replacement Timing Covers**



New cast aluminum stock replacement timing covers are available in several styles.

ALL90014 Early Style, With Fuel Pump Mounting Boss And

Dipstick Tube Opening

ALL90015 1995 Mustang/1996-01 Explorer/Mountaineer

Rev. Rotation With Short Water Pump

ALL90016 1983-89 Cars/Trucks/SUV's, With ECC Sensor

Mount And Fuel Pump Mounting Boss

ALL90017 1985-94 Mustang With EFI

ALL90018 1987-96 Trucks With EFI Reverse Rotation

BB Ford Timing Cover ALL90029

Aluminum timing cover fits most 429-460cid engines. Cover has provisions for a dipstick tube and mechanical fuel pump for early applications. A dipstick tube plug and a fuel pump block off plate for use with later model fuel injected engines are included.





SB Chevy Billet Timing Covers (For Sprint Cars)

Machined billet aluminum timing cover is lightweight, durable and weighs over one lb. less than cast aluminum covers. Fits major brand oil pumps. Mounting hardware included.





Aluminum Cam Seal Plates

Aluminum cam seal plate provides a reliable seal and tight fit.

	-	-	
	-	7	
7	1	7	

Part No.	Size	Color	Application
ALL90085	2.103"	Black	GM Small Block
ALL90086	2.253"	Gold	Rodeck Block w/1.875 Roller Cam Bearing
ALL90087	2.310"	Blue	Most Blocks w/50mm Roller Cam Bearing
ALL90088	2.382"	Silver	Dart Small Block, Aluminum
ALL90089	_	_	Replacement Cam Plate Seal

Chevy Cam Lock Plate And Bolts ALL90060

Kit includes camshaft retaining plate with locking tabs and three alloy steel, 150,000 PSI bolts. Fits all small and big block Chevys.



ALL90050 ALL90052

ALL90054

Cam Button Spacers

Buttons limit lateral movement of the camshaft in engines without cam thrust plates and reduce friction for "free" horsepower. Machining of the cam sprocket may be required.

ALL90050..... SB Chevy Aluminum, Early With Flat Timing Cover ALL90052 SB Chevy Aluminum, Late With Indented Cover

ALL90054 SB Chevy Roller Bearing ALL90053 BB Chevy Aluminum

ALL90055 BB Chevy Steel, Roller Bearing

SB Chevy Cam Bearing Tool ALL96470

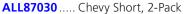




For installing cam bearings quickly and easily without damage. Shaft is steel; pilot and driver are aluminum.

Crankshaft Keys

Replace worn crankshaft keys for proper timing gear and dampener positioning.



ALL87032 Chevy Long

ALL87034 Chevy Vortec, LS1/LS2/LS6

SB Chevy Gear Drive Assemblies

Aluminum gear drive provides accurate cam timing and the ability to adjust valve timing without removing the oil pan. Aluminum frame features a built-in front oil pan gasket retainer and an idler gear cradle for accurate cam



timing throughout the RPM range. Gear drive are complete with cam, crankshaft and idler gears, needle bearing thrust kits, offset degree bushing kit, extra-long dowel pins and installation instructions. Gear drives are commonly used with ALL90080 and ALL90081 Billet Timing Covers or may be used with most stock-type covers such as the ALL90010 with slight modification.

ALL90000 .. Standard Cam Gear Drive **ALL90100**...Raised Cam Gear Drive (+.391")

Replacement Parts

ALL90001 .. Cam Gear ALL90004..Cam Plate Shims, 10-Pk. ALL90002 .. Crank Gear **ALL90005**..Cam Degree Bushing Set **ALL90003** ..ldler Gear ALL90007 .. Thrust Washer Set

SB Chevy Aluminum **Crankshaft Hub ALL90030**

Designed specifically for circle track racers, this SB Chevy aluminum crank hub is NOT a harmonic damper. Hub is significantly lighter than a harmonic balancer and dramatically reduces rotating weight for quicker acceleration off the turn. Hub has engraved timing marks at 0° and from 30°-42°, is 4-3/8" in diameter, features (3) 3/8"-16 accessory threads and weighs just one pound. Fits all internally balanced small block Chevy engines. Designed for internally balanced engines only and must be balanced with rotating assembly.

Related Part

ALL90031 Adjustable Aluminum Timing Pointer

Timing Pointers

Black anodized, billet aluminum timing pointers are adjustable to precise timing increments. Chevy pointers are designed for use with stamped steel covers; longer hardware will be required if using a cast aluminum cover.

ALL90023 SB Chevy 6-1/4" Dia. Balancers ALL90020 SB Chevy 6-3/8" Dia. Balancers ALL90021 SB Chevy 7" Dia. Balancers ALL90024 SB Chevy 7-1/4" Dia. Balancers ALL90025 SB Chevy 8" Dia. Balancers ALL90026 BB Chevy 6-1/4" Dia. Balancers ALL90022 BB Chevy 7" Dia. Balancers

ALL90027 BB Chevy 8" Dia. Balancers **ALL90034*** ... SB Ford SVO B, 3/8" Bolt

ALL90035⁺.... SB Ford SVO C, 3/8" Bolt **ALL90036*** ... SB Ford Stock B, 5/16" Bolt ALL90037⁺ SB Ford Stock C, 5/16" Bolt

*11-O'Clock Tab Position, Will Not Fit Cleveland Engines †10-O'Clock Tab Position, Will Not Fit Cleveland Engines



ALL90031



ALL26211

SB Chevy Fabricated Aluminum Valve Covers

TIG-welded covers are lightweight with a thick rail for gasket support. Covers without tubes are perfect for custom modification and use on dry sump systems. 1-3/8" breathers sold separately.

ALL26170 Standard Covers Without Tubes ALL26171 Standard Covers With Tubes ALL26172 Centerbolt Covers Without Tubes

Related Parts

ALL36204..... Non-Shielded Breather, 1-3/8" ALL36205 Shielded Breather, 1-3/8"

Chevy LS Fabricated Aluminum Valve Covers

Fabricated valve covers for most 1997-2005 LS1/LS6 engines feature a thick billet rail, an o-ring sealed threaded fill cap and include o-ring style gaskets and mounting bolts. Valve covers have an

inside height of 2-1/4" to clear most aftermarket valvetrain. Coil mounting brackets sold separately.

ALL26210 Valve Covers Without Coil Mount ALL26211 Valve Covers With Coil Mount

ALL26212 Coil Mounting Brackets 1997-2005 LS1/LS6 Coils Steel Stamped Brackets for use with Delco D580 Coils (ALL 81400)

BB Chevy Fabricated Aluminum Valve Covers

TIG-welded valve covers with a thick billet rail are available with or without breather holes for custom modifica-

tion such as vacuum pump fittings. Recessed bolt pockets and tall design to clear most aftermarket valvetrains. Hardware included.

ALL26176 Valve Covers Without Holes **ALL26177** Valve Covers With Holes

SB Chevy Cast Aluminum Valve Covers

Tall polished aluminum valve covers are sold in pairs, with two 1-3/8" baffled breather tubes on one cover. Breathers sold separately.

ALL26137 Centerbolt Covers ALL26139 Standard Covers

Related Parts

ALL36204..... Non-Shielded Breather, 1-3/8" ALL36205 Shielded Breather, 1-3/8"

SB Chevy Steel Valve Covers

Steel small block Chevy valve covers are an excellent alternative to more expensive and heavier aluminum valve covers. Sold in pairs, one cover



is solid without holes and one cover includes two fully welded, 1-1/2" baffled breather tubes for proper crankcase venting. Breathers sold separately.

ALL26143 Raw Unpainted ALL26145 Yellow Zinc Plated ALL26147 Black Painted ALL26140 Clear Zinc Plated

Valve Cover Hold Down Nuts

Easily remove these hold down nuts with a 1/4" extension. The spring ball on your extension holds the nut in place, no wrench or socket needed! Package of 4.

ALL26320 1/4"-20 Coarse Thread Nuts **ALL26322** 1/4"-28 Fine Thread Nuts

SB Chevy Cork Valve Cover Gaskets

Natural cork material gaskets conform to irregular castings to provide a leak free



fit. Coated gaskets feature an addition layer of protection against leaking and are reusable. Gaskets are sold in pairs.

ALL87210 5/16" Thick

ALL87212 5/16" Thick with Steel Core
ALL87214 5/16" Thick with Steel Core (Coated)
ALL87216 3/16" Thick with Steel Core Centerbolt/Vortec (Coated)

SB Chevy Rubber Valve Cover Gaskets

ALL87215

Reusable rubber gaskets are 3/16" thick and feature a molded-in steel reinforcing



layer to help gasket keep its shape and provide a leak free fit. Package of 2.

Crankcase **Evacuation System**

ALL34145

Reduce crankcase pressure for optimum piston ring seal, fewer oil leaks and better engine performance. System includes two of each: chrome plated push-in breathers, check valves, weld-in 3-1/2" long threaded

pipe adapters, rubber breather grommets and four hose clamps. Evacuation hoses not included. Use with 5/8" diameter hose.

Replacement Parts ALL34146......Check Valve



ALL26137



Breathers

Shielded or non-shielded clamp-on breathers will fit valve cover tubes.

Non-Shielded

ALL36202 1-1/2" ALL36204 1-3/8"

Shielded

ALL36203 1-1/2" ALL36205 1-3/8"



Breather Sock ALL36208

The breather sock fits over standard 3" diameter, 2-1/2" tall valve cover breathers to help catch residual oil discharged from the engine through valve cover breathers. A practical alternative to wrapping dirty shop rags around valve cover breathers! Socks are easily cleaned with a mild detergent.



Breather Filters

Mesh filters add another layer of protection against dirt, dust and debris. Fits 3" diameter breathers typically used on valve covers, breather tanks and helmet systems.





Breather Cover ALL26232

Water-repellent cover fits 3" diameter breathers commonly found on valve covers, breather tanks and helmet systems. Cover with drawstring fits both shielded and nonshielded breathers.



ALL36173

ALL36174

Large Fill Plug Kits

Kits include a weld-in bung and an easy grip O-ring cap with positive seal. Kits are often used as an inspection plug or a filler plug. Large fill plugs have a 3" opening, 3"-12 thread.

Kit With Aluminum Weld-In Bung

ALL36170 Silver Kit **ALL36171** Black Kit **ALL36172** Red Kit ALL36173 Polished Kit

Kit With Steel Weld-In Bung

ALL36174 Silver Kit ALL36175 Black Kit **ALL36176** Red Kit ALL36177 Polished Kit



Small Fill Plug Kits

Kits include a weld-in or bolt-in bung and an easy grip O-ring cap with positive seal. Kits are often used as an

inspection plug or a filler plug. Small fill plugs have a 1-3/8" opening with 1-1/2"-12 threads.

Kit With Aluminum Weld-In Bung

ALL36160 Silver Kit ALL36164 Black Kit **ALL36165** Red Kit ALL36166 Polished Kit

Kit With Steel Weld-In Bung

ALL36161 Silver Kit ALL36167 Black Kit **ALL36168** Red Kit ALL36169 Polished Kit

Kit With Aluminum Bolt-In Bung

ALL36180 Silver Kit **ALL36181** Black Kit ALL36182 Red Kit ALL36183 Polished Kit



ALI 36182

ALL36160

Weld Bungs

Weld-on bungs are available in 6061 aluminum or mild steel and allow additional fittings to be added to radiators, or oil pans and building of custom tanks or other components.

Female NPT

Size	0.D.	Aluminum	Steel
1/8"-27NPT	3/4"	ALL50740	ALL50750
1/4"-18NPT	7/8"	ALL50741	ALL50751
3/8"-18NPT	1"	ALL50742	ALL50752
1/2"-14NPT	1-1/4"	ALL50743	ALL50753
3/4"-14NPT	1-3/8"	ALL50744	ALL50754
1"-11-1/2NPT	1-5/8"	ALL50745	_



Male AN

Size	Thread	Flange O.D.	Aluminum	Steel
-4AN	7/16"-20	3/4"	ALL50760	ALL50770
-6AN	9/16"-18	7/8"	ALL50761	ALL50771
-8AN	3/4"-16	1"	ALL50762	ALL50772
-10AN	7/8"-14	1-1/8"	ALL50763	ALL50773
-12AN	1-1/16"-12	1-3/8"	ALL50764	ALL50774
-16AN	1-5/16"-12	1-5/8"	ALL50765	ALL50775
-20AN	1-5/8"-12	1-3/4"	ALL50766	ALL50776



Female AN ORB

Size	Thread	O.D.	Aluminum
-4AN	7/16"-20	3/4"	ALL50780
-6AN	9/16"-18	7/8"	ALL50781
-8AN	3/4"-16	1"	ALL50782
-10AN	7/8"-14	1-1/8"	ALL50783
-12AN	1-1/16"-12	1-3/8"	ALL50784
-16AN	1-5/16"-12	1-5/8"	ALL50785





LS Cylinder Head Bolt Kits

LS head bolt kits are direct replacement OE style Torque-to-yield (TTY) head bolts which make them ideal for use on stock and mild performance rebuilds. Follow OEM torque sequence and specifications for proper installation.

ALL87004.....1997-2003 Gen III

ALL87005.... 2004-06 Gen III (Fully-threaded)

ALL87006.... 2004-2019 Gen III & IV

Chevy Cylinder Head Bolts

Original equipment Grade 8 cylinder head bolts are ideal for stock or budget performance rebuilds.

ALL87000 SB Chevy, 34-Pack

ALL87002 BB Chevy, 32-Pack

Head Dowel Pin Kits

Dowel pins are an often overlooked item when performing a rebuild or upgrading cylinder heads. Dowel pins keep gaskets in position and properly align cylinder heads to the engine block. Kits include four pins.

ALL87020 SB Chevy **ALL87026** BB Chevy **ALL87024** LS GM **ALL87028** SB Ford

Port And Polish Kit

ALL11052

Kit includes an assortment of 60, 80 and 120 grit cartridge rolls for cleaning and modifying intake and exhaust ports to match gaskets, remove casting marks and for smoothing out ruppers. Two 1/4" mandrels

smoothing out runners. Two 1/4" mandrels are included with each kit.

Dykem Layout Fluid ALL12070

Apply layout fluid to the work surface to enhance visibility of scribes during fabrication. Blue fluid dries in minutes to a uniform,

thin film without cracking or chipping. 4 oz. container has a built-in brush under cap. Not intended for use in set up of ring and pinion gear sets.

High Performance 11/32" Umbrella Valve Seals

ALL90235

High quality umbrella style seal moves with valve and deflects oil away from valve guide area. Seals have an O.D. of .750" to fit under most stock or larger diameter valve springs and a .580" I.D. to clear valve guides on most engines. Seals require no machining for installation. Set of 16.

High Performance PTFE Valve Seals

Seals have spring loaded wipers for maximum oil control. Machining is required for most installations. Set of

is required for most installations. Set of 16.

ALL90240..... 11/32" Valve Seals, .620" Seal O.D., .531" Mach. Tool Guide O.D.

ALL90241 11/32" Valve Seals, .600" Seal O.D., .500" Mach. Tool Guide O.D.

ALL90242 3/8" Valve Seals, .620" Seal O.D.,

.531" Mach. Tool Guide O.D.

ALL90244..... 5/16" Valve Seals, .620" Seal O.D.,

.531" Mach. Tool Guide O.D.

SB Chevy Rocker Arm Stud Kit ALL90230

Grade 8, 3/8"-24 original equipment style studs require a 7/16"-14 tapped hole in the head. Studs have a 2.375" overall length. Package of 8.

SB Chevy Flat Pushrod Guide Plate ALL90250

Guide plates are designed for 5/16" hardened pushrods and stabilize valvetrains using high lift camshafts and high pressure valve springs. Package of 8.

Valve Lash Wrenches

Allstar valve lash wrenches save precious time and make valve adjustment easy. No more fumbling with two separate wrenches.

Available for Jesel, T&D and other polylock style rocker assemblies.

ALL96400..... 7/16" Adjuster Wrench, 1/8" Allen Wrench, Jesel Assemblies

ALL96401 1/2" Adjuster Wrench, 3/16" Allen Wrench, T&D Assemblies

ALL96402 9/16" Adjuster Wrench, 3/16" And 7/32"

Allen Wrénches, For Stud Girdle Assemblies ALL96403 5/8" Adjuster Wrench, 3/16" And 7/32" Allen

Wrenches, Poly Lock

Intake Manifold Bolt Kit ALL87010

Grade 8, 12-point flange clear zinc bolts are 3/8" x 1-1/8" long to fit small block Chevys and Chrysler "A" and "B" engines where clearance is insufficient for standard hex head bolts. Sets of 12 include stainless washers.





SB Chevy "Ram Horn" **Exhaust Manifolds**

ALL34200

"Ram Horn" manifolds have increased exhaust flow over traditional manifolds and added steering shaft clearance. Ideal for street rods and classes requiring cast iron exhaust manifolds. Sold in pairs.

SB Chevy Header Gaskets

Durable reinforced steel core and graphite composite gaskets remain soft and pliable to conform ALL87262 to header and head surfaces. providing an ALL87264 excellent, long lasting seal. Sold each. ALL87266 ALL87260 1-5/8" Square Port (Stock) **ALL87262** 1-3/4" D-Port (Standard) **ALL87264** Spread Port (Staggered Bolt Pattern)

Electric **Exhaust Cutouts**



Eliminate the need to

manually uncap the exhaust. 12V Electric cut out bolts to a standard 3-bolt collector flange and uses a powerful geared motor to open and close a butterfly valve to direct exhaust. Sold each.

ALL34230 3" Collector Pattern (3-7/8" B.C.) ALL34231 2-1/2" Collector Pattern (3-1/2" B.C.)

ALL87266 Crate Engines (Non LS/Fast Burn)

ALL87268 LS Series Engines (Excluding LS7)

IMPORTANT! ALL34232 or ALL34233 harness (sold separately) is required for proper operation.

Related Parts

ALL34232 Single System Harness ALL34233 Dual System Harness

O₂ Sensor Plug And Bung

Hard-to-find O₂ sensor fittings work in a variety of uses.

ALL34150 18mm Sensor Plug

ALL34152 18mm Sensor Bung, Angled ALL34153 18mm Sensor Bung, Straight



ALL34233



Swivel Exhaust Hanger ALL34220

Hanger swivels horizontally and vertically to simplify mounting in any position. Bolt or weld to chassis to support additional weight of mufflers, turndowns, etc. Steel strapping is 1/8" thick.

Header Wrap

Reduce under hood temperature while containing header tube heat for increased power. Fiberglass woven wrap is available in natural or black rolls.



2" Wide Rolls

1" Wide Rolls

ALL34240 Natural 15'	ALL34244 Natural 15'
ALL34241 Natural 25'	ALL34245 Natural 25'
ALL34242 Natural 50'	ALL34246 Natural 50'
ALL34243 Natural 100'	ALL34247 Natural 100'
ALL34250 Black 15'	ALL34254 Black 15'
ALL34251 Black 25'	ALL34255 Black 25'
ALL34252 Black 50'	ALL34256 Black 50'
ALL34253 Black 100'	ALL34257 Black 100'

Stainless Steel Cable Ties

ALL34262 7-1/2" Long, Package of 8 ALL34264..... 14-1/2" Long, Package of 4

Universal Heat Wrap ALL34238

Heat resistant material measures 7" x 22", making it ideal for wrapping starter motor, or other components that are close

to high heat areas. Wrap features a reflective material on one side to protect against radiant heat and includes two 24" long stainless steel tie wraps for securing material.

Replacement Part

ALL34266 24" Stainless Steel Ladder Ties, 2-Pack

Exhaust Shields

Aluminum shields protect body panels from exhaust exiting through the passenger door and provide a clean, finished look from the outside, simplifying exhaust routing. Round shield I.D. is 6", commonly used for exiting one 5" diameter exhaust



ALL34183

ALL34181

pipe. Oval shield I.D. is 5" x 9", commonly used for exiting two 3-1/2" diameter exhaust pipes.

ALL34180 Round Flange, 55 Degrees To Door ALL34181 Round Flange, 90 Degrees To Door ALL34182 Oval Flange, 55 Degrees To Door ALL34183 Oval Flange, 90 Degrees To Door

Header Tab Kits

Weld to headers to hold slip-on collectors in place or use to retain primary tubes on adjustable headers.



Kit includes two pairs of tabs, two bolts and two hex nuts. Two tabs are recommended to secure each collector. Tabs are .085" thick.

ALL60039 3/4" Tall Tabs x 1-1/2" Long

(When Combined 2-1/2" Long), 2-Pack

ALL60040..... 1" Tall Tabs x 2-1/2" Long

(When Combined 4" Long), 2-Pack

TA-Bl



SB Chevy Gaskets

Popular gaskets and gasket sets for most 1955 to 1985 SB Chevy engines.



ALL87220 Oil Pan Set, 1975 and later*

ALL87240 Front Of Engine Set ALL87230 Water Pump To Block

ALL87230-10.. Water Pump To Block 10-Pack

ALL87231 Thermostat Housing

ALL87231-10.. Thermostat Housing 10-Pack

ALL87236 Fuel Pump

ALL87236-10.. Fuel Pump 10-Pack ALL87238...... Fuel Pump Plate

ALL87238-10.. Fuel Pump Plate 10-Pack ALL87250..... Distributor Gasket ALL87250-10.. Distributor Gasket 10-Pack

Mini Stretch Wrap with Handle

Handheld stretch wrap dispenser has multiple uses around the shop or home including bundling parts together to keep organized, protecting items from damage and wrapping up spare parts until needed. Wrap is an 80-gauge low density polyethylene material measuring 3" wide x 1000ft long and features a high elastic characteristic to keep items tightly bound together.

ALL14230 Mini Stretch Wrap with Handle **ALL14232** Replacement Roll 3" x 1000'

Fogging Oil ALL78220

Spray aerosol lubricant (with special additives) into the intake and spark plug holes to coat and lubricate the cylinders, valves and valve seats. Prevents horsepower-robbing corrosion and eliminates scuffing at start-up after periods of storage. May be used in all 2- or 4-cycle, carbureted or fuel injected gasoline engines in cars, trucks, motorhomes, ATV's, etc. Sold in a 12 oz. can.

Carburetor Gaskets



ALL87200 4150 Open **ALL87202** 4150 4-Hole **ALL87204** 4412 2-Hole, 2bbl. **ALL87206** 4500 Open, Dominator

Air Cleaner Gasket ALL87207

OE style composite gasket fits most popular carburetors with 5-1/8" neck. Gasket seals air cleaner base to carburetor neck helping prevent dirt and moisture from entering carburetors.

Engine Cover ALL26234

Water-repellent cover with bottom draw string is perfect for storage or transportation. 32" long x 23" wide x 28" tall.



NEW

SB Chevy Aluminum Exhaust Block Off Plates



ALL34210 Standard, Individual Plates, 1/8" ALL34212 Standard, 1-Piece Design, 1/16" ALL34214 Spread Port, 1-Piece Design, 1/16"

SB Chevy Plastic Exhaust Block Off Plates

One-piece design 1/4" thick block off plates seal exhaust ports during engine storage or repairs. Plates protect against moisture, dust and dirt. Sold in pairs.

ALL34213 Standard 23°

ALL34215 Spread Port And Dart (Excluding 23°)

ALL34217 SB2



ALL34217

^{*}This set only includes the thick front oil pan seal which is designed for 1975 and later engines and most aftermarket pans.

ALLSTAR' PERFORMANCE

ALL10130

Accepts Bolt-On

Wheel Kits

Engine Cradles

Engine cradles are available in standard duty or heavy duty, both with provisions for mounting wheels and are made of 1" square tubing with black powder coating. All

cradles are for V8 engines, include Grade 5 fasteners and may be easily disassembled for storage. Standard duty cradles accept wheel kits with 3/8" studs. Heavy

duty cradles accept wheel kits with 1/2" studs. Wheel kits sold separately.



ALL10130..... SB and BB Chevy ALL10138..... GM LS Series ALL10145..... SB Ford**

ALL10147...... SB Ford Modular/Coyote

ALL10150..... SB Mopar **ALL10151**..... Hemi (5.7 And 6.1)

Heavy Duty Cradles

ALL10132..... SB and BB Chevy ALL10139..... GM LS Series ALL10142..... Oldsmobile ALL10144.... Pontiac ALL10148.... SB Ford**

ALL10149..... SB Ford Modular/Coyote

ALL10152..... SB Mopar **ALL10154**..... BB Ford **ALL10156**..... BB Mopar

Standard Duty Wheel Mount



Heavy Duty Wheel Mount

**Designed to work with stock and most aftermarket blocks including Dart, World, and Ford Boss with ribbed engine mount bosses and bulged water jackets.

Caster Wheel Kits

Caster wheel kits may be mounted to most Allstar engine cradles or used when building projects around the shop. Kits include four caster wheels, locking wheel kits include two locking casters.

Standard Duty Caster

Casters are rated at 125lbs per wheel and feature a 3/8"-16 x 1-1/4" mounting stud.

ALL10162..... 3" Wheel Kit **ALL10163**..... 3" Wheel Kit Locking

Heavy Duty Caster

Casters are rated at 300lbs per wheel and feature a 1/2"-13 x 1" mounting stud.

ALL10164...... 3" Wheel Kit ALL10165...... 3" Wheel Kit Locking

ALL10166..... 5" Wheel Kit

SB/BB Chevy Engine Cradle ALL10172

A quality cradle for small block and big block Chevrolet engines. Casters included.



SB/BB Chevy Economy Engine Cradle

ALL10171

Cradle is great for storing or transporting engines safely. Designed to fit small and big block Chevrolet engines, cradle

is fully welded from 1" square tubing and powder coated black. Cradle has provisions for mounting our standard duty wheel kits with 3/8" wheel studs.

SB Chevy 2-Piece Engine Stand

ALL10157

Two-piece engine stand constructed from 1" x 2" steel tubing is specially designed to clear most oversized dry sump oil pans with up to a 9" deep sump. Stand includes six 3/8" x 1" grade 5 bolts and accepts wheel kits with 3/8" studs.

Engine Lift Plate ALL10123

Eaco angine swaps with the

Ease engine swaps with the Allstar engine lift plate. Bolts to manifold in place of carburetor. Yellow zinc coated plate fits standard Holley 4150/4160 and 4500 Dominator, Rochester Quadrajet, Carter, Motorcraft, Edelbrock,

Edelbrock Q-Jet and Carter AFB carburetors.





Brian Ruhlman



Sprint Engine Cradle ALL10159

Cradle bolts to most stock type and aftermarket SB Chevy blocks, including narrow pattern lightweight and standard bell housing bolt patterns. Slotted front mounts accept



most frame width engine mounts. Provisions for standard wheel kits are positioned to support complete engines with attached radiators.

Engine Lift Handles ALL10136

Need to move a spare motor when an engine hoist isn't the solution? These machined aluminum 4" long sure grip handles will thread into any engine block or cylinder head with 3/8"-16 coarse thread holes. Package of 4.



Bellhousing Dowel Pins

Steel dowel pins are approximately 1/2" longer than stock pins and are required when running an engine mid-plate, rear motor MLL38152 mounts or an aftermarket bellhousing. Pins fit most GM blocks and are sold in pairs.

ALL38150 Solid Pins ALL38152 Hollow Pins

Motor Plates

Motor plates are used to replace the front motor



mounts allowing relocation of the engine in the chassis, including lowering or when moving the engine back in the chassis. Plates prevent engine movement and reinforce the front suspension for better handling and increased reaction times. Fabricated from 1/4" thick 6061-T6 aluminum, motor plates are often trimmed to fit the chassis or frame mounts. Plates are machined for a perfect fit to mount between the water pump and engine block.

ALL38120 SB Chevy 10" x 36" **ALL38124** BB Chevy 12" x 36"

Universal Dragster Front Motor Plates

Universal width motor plate includes separate frame saddles for the motor plate to rest on allowing installation of engine into any width dragster style chassis. Saddles feature



machined flats which allow the engine plate to rest directly on the saddle securing the motor plate between the saddle and the existing frame mounting tab. Motor plate is 1/4" thick and includes saddles for chassis up to 1-3/8" in diameter. Note: Drilling will be required to fasten saddles and motor plate to existing frame mounts once plate is positioned on frame.

ALL38142 SBC ALL38143 BBC

Universal Engine Mid-Plates

Universal plates are positioned between the engine and transmission to provide a mid-engine mounting location and help stiffen the chassis. These mid plates



are great for drag racing and street cars, allowing easier engine or transmission removal, and installation of engine/transmission into almost any chassis. Plates fit most GM V8 applications and measure 15"H x 29"W.

ALL38121 Steel (.090") **ALL38122** Aluminum (.250")

Engine Mid-Plates

Aluminum midplates are 1/4" thick 6061 aluminum, black powder coated and profiled to keep weight at



a minimum (less than 4 pounds) without compromising strength or durability. Unique, dual mounting holes (unless specified otherwise) allow engine to be raised 1" in chassis.

ALL38132 SB Chevy, 5/8", Pierce/Bandit Chassis **ALL38133** SB Ford, 5/8", Pierce/Bandit Chassis

ALL38134 SB Chevy, 1-1/8", Pierce LM, Barry Wright Chassis **ALL38138** SB Chevy/SB Ford, 2-5/8", Rocket Chassis

ALL38139 SB Chevy/SB Ford, Shaw Chassis

CT525 Motor Mounts

ALL38085

Steel mounts allow a CT525 crate or other LS series engine to fit in most circle track cars. Slots are 1" wide



and can be used in standard or 1" setback locations. Sold as a pair.



Bobby Stremme



ALL38101

ALL38065

Standard Chevy Front Motor Mounts

Mounts are designed for fabricated chassis or stock chassis that have fabricated motor mounts attached to the frame. Solid style mounts bolt in place of stock motor mounts on standard Chevy engines and features a frame mounting hole that is centered on the original mounting location. Frame mounting holes are designed for 1/2" fasteners and slotted for a universal fit in many applications. Sold each.

ALL38100 Steel ALL38098 Aluminum

Offset Chevy Front Motor Mounts

Mounts are designed for fabricated chassis or stock chassis that have fabricated motor mounts



ALL38108 1" Offset **ALL38109** 2" Offset **ALL38110** 3-3/8" Offset

Chevy Rear Motor Mounts

Solid style mounts bolt between the engine and transmission of most Chevy V8's creating a middle support. Unwelded version allows tab to be installed

in any location. Commonly used with solid front motor mounts. Extended bellhousing dowel pins recommended, extended pilot bearings or other spacers may be required.

ALL38101 Welded
ALL38102 Unwelded Universal Kit

Chevy Raised Motor Mounts

Use these mounts to raise the engine in the chassis instead of spacers and longer bolts. Use when changing from a dry sump to a wet sump engine or when extra clearance is required. 1" or 1-1/2" raised steel mounts are 1/4" thick and slotted for easy installation. Mounts are sold each.

ALL38060..... Front, Raised 1" **ALL38061**..... Front, Raised 1-1/2" **ALL38064**..... Rear, Raised 1" **ALL38065**..... Rear, Raised 1-1/2"

Ford Motor Mounts

Steel mounts have been updated and now fit the newer and original 302-351W small blocks. Sold in pairs.

ALL38112 Rear Motor Mounts
ALL38113 Front Motor Mounts



GM Motor Mount Kit

ALL38082

Bolt-in steel mounts for GM metric chassis bolt to crossmember and accept Allstar steel motor mounts (ALL38100). A "captured" 1/2"-13 nut eases engine installation. Sold in pairs.



Motor Mount Spacers

Aluminum spacers are profiled for weight reduction and are 1-1/2" O.D. x 1/2" I.D. Use with pedestal style engine mounts. Sold each.

ALL18620 1/4" ALL18621 1/2" ALL18622 1" ALL18623 1-1/2" ALL18624 2"

High Vibration Motor Mount Spacer Kit (Big Bar Soft Spring Cars)

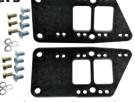
ALL18626

Ever wonder what happens to many race car components when you continually bottom out your chassis? Spacers are made from a unique material that won't let your engine vibrate around under normal conditions yet will give some when you bottom out, making life a little easier on your engine and driveline components. Spacers are 1/4" thick, 1-1/2" O.D. with a 1/2" hole. Set of two.

LS Motor Mount Adapters

ALL38084

Adapters allow bolting an early GM 3-bolt motor mount to the late model LS style block with a 4-bolt pattern. Adapters place the early mount in approximately the same

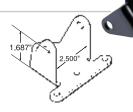


location as found on the original SB/BB Chevy engines and also features optional holes for moving the engine forward up to 2-1/4" for additional firewall clearance. Sold in pairs and includes mounting hardware.

Chevy Solid Motor Mount

ALL38080

Solid motor mount is 1/4" thick steel and replaces stock Chevy rubber mount to eliminate torque loss and prevent engine movement. Sold each.





Chevy Motor Mount Pads ALL38090

Steel pads are 1/4" thick and traditionally used as shims to gain extra oil pan or header clearance. May also be used for building custom motor mounts or engine stands. Sold in pairs.



GM Motor Mount ALL38114

Replacement stock mount for most GM engines. Mount bolts to chassis.

Fits:

1970-88 Monte Carlo 1973-87 Cutlass 1970-87 El Camino 1974-83 Malibu 1970-79 Nova 1971-92 Camaro 1977-87 Regal 1970-85 Impala 1970-73 Chevelle

GM Motor Mount ALL38115

Replacement stock mount for most GM V-6 engines. Mount bolts to chassis. Designed to work with metal shel type mount bolt to engine.

Ford Motor Mount ALL38116

Replacement rubber mount for Allstar Ford Ranger V8 conversion kit. Mount bolts to the engine.



John Motycka



Chevrolet/GM V8 Engine Conversion Kits

Conversion kits are a good starting point when installing a small block Chevy/TH350 transmission combination into most 1982-up S-10, S-15, Jimmy or Blazer. Additional components and fabrication will be required depending on engine and application.

ALL38250 2WD Conversion Kit Includes:

- Engine Mount Set
- Headers
- Engine Mounts

ALL38251 2WD Conversion Kit Includes:

- Engine Mount Set
- Headers
- Engine Mounts
- Radiator



Ford V8 Engine Conversion Kit ALL38200

Conversion kits are a good starting point when installing a 289/302 with a C-4 transmission combination into a 1982-97 2WD Ranger. Additional components and fabrication will be required, depending on engine and application.

Kit Includes:

- Engine Mount Adapter Set
- Oil Pump Pick-Up Tube
- Filter Adapter
- Engine Mounts
- Radiator
- Oil Pan





3/16" Small Head Economy Rivets

Small head rivets have a 3/8" O.D. head and packaged 250 per box.

Color	Steel Mandrel	Aluminum Mandrel	Grip Range
Silver	ALL18000	ALL18040	1/4" To 3/8"
White	ALL18001	_	1/4" To 3/8"
Red	ALL18002	_	1/4" To 3/8"
Black	ALL18003	_	1/4" To 3/8"
Blue	ALL18004	_	1/4" To 3/8"
Orange	ALL18005	_	1/4" To 3/8"
Yellow	ALL18006	_	1/4" To 3/8"
Silver	ALL18020	_	5/8" To 3/4"
White	ALL18021	_	5/8" To 3/4"
Red	ALL18022	_	5/8" To 3/4"
Black	ALL18023	_	5/8" To 3/4"



3/16" Small Head Rivets

Small head rivets have a 3/8" O.D. head and packaged 250 per box.

Color	Steel Mandrel	Aluminum Mandrel	Grip Range
Silver	ALL18101	ALL18107	1/8" To 1/4"
Silver	ALL18103	ALL18109	1/4" To 3/8"
Silver	ALL18105	_	3/8" To 1/2"
White	ALL18114	ALL18116	1/4" To 3/8"
Red	ALL18120	ALL18122	1/4" To 3/8"
Black	ALL18126	ALL18128	1/4" To 3/8"
Pepsi Blue	ALL18132	_	1/4" To 3/8"
Chevron Blue	ALL18134	ALL18135	1/4" To 3/8"
Orange	ALL18136	ALL18137	1/4" To 3/8"
Yellow	ALL18138	ALL18139	1/4" To 3/8"



3/16" Large Head Economy Rivets

Large head rivets have a 5/8" O.D. head and packaged 250 per box.

Color	Steel Mandrel	Aluminum Mandrel	Grip Range
Silver	ALL18010	ALL18050	1/4" To 3/8"
White	ALL18011	ALL18051	1/4" To 3/8"
Red	ALL18012	ALL18052	1/4" To 3/8"
Black	ALL18013	ALL18053	1/4" To 3/8"
Blue	ALL18014	ALL18054	1/4" To 3/8"
Orange	ALL18015	-	1/4" To 3/8"
Yellow	ALL18016	ALL18056	1/4" To 3/8"
Silver	ALL18030	-	5/8" To 3/4"
White	ALL18031	_	5/8" To 3/4"
Red	ALL18032	-	5/8" To 3/4"
Black	ALL18033	_	5/8" To 3/4"



3/16" Large Head Rivets

Large head rivets have a 5/8" O.D. head and packaged 250 per box.

Color	Steel Mandrel	Aluminum Mandrel	Grip Range
Silver	ALL18141	ALL18149	1/8" To 1/4"
Silver	ALL18143	ALL18151	1/4" To 3/8"
Silver	ALL18145 [†]	_	3/8" To 1/2"
Silver	ALL18147	ALL18153	3/8" To 1/2"
White	ALL18156	ALL18158	1/4" To 3/8"
Red	ALL18162	ALL18164	1/4" To 3/8"
Black	ALL18168	ALL18170	1/4" To 3/8"
Pepsi Blue	ALL18174	ALL18175	1/4" To 3/8"
Chevron Blue	ALL18176	ALL18177	1/4" To 3/8"
Orange	ALL18178	_	1/4" To 3/8"
Yellow	ALL18180	ALL18181	1/4" To 3/8"







3/16" Multi Grip Rivets

Multi grip style rivets have a ribbed body that draws panels together tighter than standard smooth body rivets. Select proper grip range and use with 13/64" drill bit for best results. Box of 250.

Color	Steel Mandrel	Aluminum Mandrel	Head Size	Grip Range
Silver	ALL18110	_	Sm. (3/8")	3/16" To 3/8"
Silver	ALL18090	ALL18070	Med. (1/2")	1/16" To 3/8"
Silver	ALL18086	ALL18074	Med. (1/2")	1/16" To 5/8"
Silver	ALL18094	_	Lg. (9/16")	1/16" To 3/8"
Silver	ALL18093	_	Lg. (9/16")	1/16" To 3/4"
White	ALL18092	-	Med. (1/2")	1/16" To 3/8"
White	ALL18096	_	Lg. (9/16")	1/16" To 3/8"
Black	ALL18091	ALL18071	Med. (1/2")	1/16" To 3/8"
Black	ALL18087	ALL18075	Med. (1/2")	1/16" To 5/8"
Black	ALL18095	-	Lg. (9/16")	1/16" To 3/8"
Black	ALL18097	_	Lg. (9/16")	1/16" To 3/4"



3/16" Tri-Fold Rivets

Tri-fold rivets have a perforated body that opens and expands to create a large backside surface area, eliminating the need for backer washers. Use a 13/64" drill bit for best results. Box of 250.

Color	Steel Mandrel	Aluminum Mandrel	Head Size	Grip Range
Silver	-	ALL18184	Sm. (3/8")	1/8" To 3/8"
Silver	_	ALL18183	Med. (1/2")	1/8" To 3/8"
Silver	ALL18185	_	Med. (1/2")	1/8" To 1/2"
Silver	-	ALL18060	Lg. (5/8")	1/8" To 3/8"
White	-	ALL18080	Sm. (3/8")	1/8" To 3/8"
White	_	ALL18188	Med. (1/2")	1/8" To 3/8"
White	-	ALL18061	Lg. (5/8")	1/8" To 3/8"
Red	-	ALL18081	Sm. (3/8")	1/8" To 3/8"
Red	_	ALL18189	Med. (1/2")	1/8" To 3/8"
Red	-	ALL18062	Lg. (5/8")	1/8" To 3/8"
Black	-	ALL18082	Sm. (3/8")	1/8" To 3/8"
Black	_	ALL18187	Med. (1/2")	1/8" To 3/8"
Black	_	ALL18063	Lg. (5/8")	1/8" To 3/8"
Chevron Blue	_	ALL18083	Sm. (3/8")	1/8" To 3/8"
Orange	-	ALL18084	Sm. (3/8")	1/8" To 3/8"
Yellow	_	ALL18085	Sm. (3/8")	1/8" To 3/8"



Cleco Pin Fastener Kits

Cleco pins are reusable and easily make a temporary connection between pieces of sheet metal during fitting. Pins will work with thicknesses up to 1/4". Kits include pliers and 10 pins.

ALL18221 Kit With 1/8" Pins **ALL18225** Kit With 3/16" Pins



Cleco Pliers ALL18220

Unique tool readily installs and removes Cleco fasteners.



A very strong spring clamp to hold pieces together when drilling is not an option.

The smooth throat prevents paint damage and is 1" deep, with a maximum clamping range of 1/2".

Pin Type Cleco Fasteners

Cleco pins permit quick, easy installation and removal of sheet metal during fitting. Pins work with thicknesses up to 1/4".

1/8" Dia. Pins	3/16" Dia. Pins
ALL18222 10-Pack	ALL18226 10-Pack
ALL18223 25-Pack	ALL18227 25-Pack
ALL18224 100-Pack	ALL18228 100-Pack

TECH TIP

Drill holes one drill size smaller than the Cleco pin size to assure a tight fit.

1/4" Pin Type Cleco Fastener ALL18234

Cleco Pins are temporary fasteners that can easily be installed or removed in 1/4" holes when fitting sheet metal or chassis tabs using the ALL18220 Cleco Pliers. 1/4" size pin is ideal to use in place of body bolts or other 1/4" fasteners. Package of 10.





1/8" Rivets

Color	Stainless Steel Mandrel	Aluminum Mandrel	Qty	Grip Range
Silver	_	ALL18190	500	1/8" to 1/4"
Silver	_	ALL18191	25	1/8" to 1/4"
Silver	_	ALL18192	500	1/4" to 3/8"
Silver	_	ALL18194	25	1/4" to 3/8"
Black	_	ALL18193	500	1/8" to 1/4"
Black	-	ALL18195	500	1/4" to 3/8"
Stainless Steel*	ALL18196	-	500	1/8" to 1/4"
Stainless Steel*	ALL18197	-	25	1"

^{*}Stainless steel body and mandrel.

1/8" Multi-Grip Rivets

Multi grip style rivets have a ribbed body that draws panels together tighter than standard smooth body rivets. Rivets feature steel mandrels, a 1/8" to 3/8" grip range and are sold in 250-piece boxes.

ALL18198..... Silver ALL18098 Black

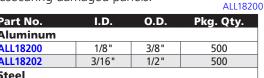
1/8" Flange Tri-Fold Rivets

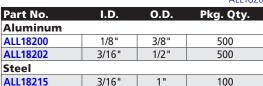
Tri-fold rivets have a perforated body that opens and expands to create a large backside surface area, eliminating the need for backer washers. Rivets feature aluminum mandrels, a 1/8" to 3/8" grip range and are sold in 100-piece boxes.

ALL18199..... Silver **ALL18099** Black

Back-Up Washers

Back-up washers provide added strength when fastening panels together or when resecuring damaged panels.





Double Ended Drill Bits

Double ended bits are basically two bits in one. Convenient bit can be flipped around for a fresh sharp bit when drilling panels for Cleco fasteners or rivets. Package of 6.

ALL18201 1/8" ALL18204 3/16"

13/64" Drill Bits ALL18203

Drill bit is for flange rivets. High speed steel bits have black oxide finishes and self centering tips.

Flute length: 1-3/16", overall length: 2-1/4". Package of 2.

Racer's Tape

A hundred uses in the shop or at the track, this is true "Racer's Tape".



1" Wide x 90' **ALL14140**..... Silver **ALL14141** Black

2" Wide x 180' **ALL14150**..... Silver **ALL14151.....** White **ALL14152.....** Red **ALL14153**..... Black **ALL14154**..... Yellow **ALL14155**..... Blue

2" Wide x 180' **ALL14156**..... Orange **ALL14157**..... Green ALL14158..... Burgundy **ALL14159**..... Purple **ALL14162**..... Teal

3" Wide x 180' **ALL14142.....** White **ALL14143**..... Black

Gaffer's Tape

Vinvl coated gaffer's tape has a dull appearance and is much stronger than standard racer tape.



2" Wide x 165' **ALL14251....** White **ALL14252** Red **ALL14253** Black **ALL14254** Yellow **ALL14255** Navy Blue

1" Wide x 150'

ALL14245 Fluorescent Green ALL14246 Fluorescent Pink ALL14247 Fluorescent Orange ALL14248 Fluorescent Yellow

2" Wide x 45'

ALL18215

ALL14145 Fluorescent Green ALL14146 Fluorescent Pink **ALL14147**...... Fluorescent Orange **ALL14148** Fluorescent Yellow

4" Wide x 165'

ALL14261.... White **ALL14263** Black



Bobby Pierce



Nylon Tie Wraps

Secure electrical wiring, gauge lines and roll bar padding. Available in black, natural, red, blue, yellow and purple nylon. Package of 100.



Black	Red
ALL14120 3-3/4"	ALL14126 7-1/4"
ALL14122 6"	ALL14127 14-1/4'
ALL14123 7-1/4"	Blue
ALL14124 11-1/4"	ALL14128 7-1/4"
ALL14125 14-1/4"	ALL14129 14-1/4'
Natural	Yellow
ALL14130 3-3/4"	ALL14136 7-1/4"
ALL14132 6"	ALL14137 14-1/4'
ALL14133 7-1/4"	Purple
ALL14134 11-1/4"	ALL14138 7-1/4"
ALL14135 14-1/4"	ALL14139 14-1/4"

Heavy Duty Nylon Tie Wraps

Heavy duty black nylon ties are ideal for emergency repairs and applications that require a secure attachment.

ALL14380 8", 25-Pack **ALL14381** 14", 25-Pack **ALL14383** 21", 10-Pack **ALL14385** 36", 10-Pack



Nylon Flush Fit Tie Wraps

Flush fit design ties have the excess portion of the tie exit in the same direction as the original tie, helping to eliminate the protruding sharp portion remaining as found in standard ties. Package of 100.



Nylon Tie Wraps With Mounting Holes

Built-in tab with mounting hole to easily secure wiring harnesses, hoses or cables to a panel with rivets or other fasteners. Package of 25.

ALL14390 8" With #10 Hole **ALL14391** 11" With #10 Hole **ALL14392** 14" With 1/4" Hole



Tie Wrap Tool ALL11005

Tired of cuts from nylon tie wraps that have been trimmed with standard wire cutters? This tool does a great job of drawing nylon ties tight around bundles of wires or cables in tight areas and easily cuts flush with a twist of the wrist. ABS constructed tool has steel cutting blades and works with common size nylon wire ties.

Stainless Steel Tie Wraps

Stainless steel ties are an excellent choice when securing header wrap to exhaust tubes or similar applications when nylon wraps won't stand up to the heat! Rust and corrosion resistant cable ties are T-304 stainless.

ALL34262 7-1/2" Long, Package of 8 **ALL34264** 14-1/2" Long, Package of 4

Tie Wrap Mounting Bases

Self-adhesive mounting bases provide a location for attaching standard tie wraps to secure wiring, cables and hoses. Bases mount to clean, flat surfaces and accept 75# and smaller wire ties. Package of 10.

ALL14116 3/4" x 3/4" Mounting Base **ALL14117** 1-1/8" x 1-1/8" Mounting Base

Safety Wire Twister Pliers ALL10120

Never lose another race because of loose bolts. Rugged pliers have an end bearing for smoother, faster twisting, especially in tight areas where a second pull is needed.

Safety Wire

Wire is used to mechanically lock pre-drilled fasteners for added security. Type 302/304 stainless steel wire features high corrosion resistance and good tensile strength in applications up to 500 degrees. Sold in a 1lb. spool enclosed in a convenient dispensing container.

ALL10121.......032" Diameter **ALL11008**......041" Diameter **NEW SIZE**

Safety Wire Drill Fixture **ALL10122**

Accurately drill holes in fasteners, allowing them to be mechanically locked in place with safety wire.

Fixture accommodates most 3/16", 1/4", 5/16", 3/8", 7/16", 1/2" and 5/8" socket head and hex head fasteners. Guide bolt tightens against fastener, holding it secure for drilling. Fixture includes two guide bolts and two 1/16" drill bits conveniently stored within the fixture.

Replacement Part

ALL99102 Replacement Drill Bits, 2-Pack







Quick Turn Fasteners



	Flush Head			Silver		ick
Body Size	Length	Material	10 Pack	50 Pack	10 Pack	50 Pack
5/16"	.500"	Aluminum	ALL19256	ALL19258	ALL19257	ALL19259
5/16"	.500"	Steel	ALL19186	ALL19188	-	-
7/16"	.400"	Aluminum	ALL19260	ALL19262	ALL19261	ALL19263
7/16"	.400"	Steel	ALL19190	ALL19192	-	-
7/16"	.500"	Aluminum	ALL19266	ALL19268	ALL19267	ALL19269
7/16"	.500"	Steel	ALL19200	ALL19202	-	-
7/16"	.550"	Aluminum	ALL19270	ALL19272	ALL19271	ALL19273
7/16"	.550"	Steel	ALL19210	ALL19212	-	-
7/16"	.750"	Aluminum	ALL19274	ALL19275	-	-



Flush Head Self-Ejecting		Silver		Black		
Body Size	Length	Material	10 Pack	50 Pack	10 Pack	50 Pack
5/16"	.400"	Steel	ALL18990	ALL18992	ALL18991	ALL18993
5/16"	.450"	Steel	ALL18996	ALL18998	-	-
5/16"	.500"	Aluminum	ALL18997	ALL18999	ALL19004	ALL19005
5/16"	.500"	Steel	ALL19000	ALL19002	ALL19001	ALL19003
5/16"	.550"	Steel	ALL19006	ALL19008	-	-
5/16"	.650"	Steel	ALL19010	ALL19012	-	-
7/16"	.500"	Aluminum	ALL19113	ALL19114	ALL19115	ALL19116
7/16"	.500"	Steel	ALL19100	ALL19102	-	-
7/16"	.550"	Steel	ALL19110	ALL19112	ALL19101	ALL19103



Flush Head Allen			Silver		Black	
Body Size	Length	Material	10 Pack	50 Pack	10 Pack	50 Pack
7/16"	.500"	Aluminum	ALL19117	ALL19118	ALL19140	ALL19141
7/16"	.500"	Steel	ALL19142	ALL19143	-	-
7/16"	.550"	Steel	ALL19144	ALL19145	-	-



Flush Head Self-Ejecting Allen		h Head Self-Ejecting Allen Silver		Black		
Body Size	Length	Material	10 Pack	50 Pack	10 Pack	50 Pack
5/16"	.500"	Aluminum	-	-	ALL19128	ALL19129
5/16"	.500"	Steel	ALL19130	ALL19131	-	-
5/16"	.550"	Steel	ALL19132	ALL19133	-	-
7/16"	.500"	Aluminum	-	-	ALL19134	ALL19135
7/16"	.500"	Steel	ALL19136	ALL19137	-	-
7/16"	.550"	Steel	ALL19138	ALL19139	-	-



Winged Head			Silver		Black	
Body Size	Length	Material	10 Pack	50 Pack	10 Pack	50 Pack
7/16"	.400"	Steel	ALL19236	ALL19238	-	-
7/16"	.500"	Steel	ALL19240	ALL19242	ALL19241	ALL19243
7/16"	.550"	Steel	ALL19250	ALL19252	-	-



Winged Head Self-Ejecting		Silver		Black		
Body Size	Length	Material	10 Pack	50 Pack	10 Pack	50 Pack
5/16"	.450"	Steel	ALL19046	ALL19048	-	-
5/16"	.500"	Steel	ALL19050	ALL19052	=	-
5/16"	.550"	Steel	ALL19056	ALL19058	-	-
5/16"	.650"	Steel	ALL19060	ALL19062	-	-
7/16"	.500"	Steel	ALL19064	ALL19066	-	-
7/16"	.650"	Steel	ALL19068	ALL19070	-	-



Quick Turn Fasteners



Oval Head			Sil	ver	Bla	ack
Body Size	Length	Material	10 Pack	50 Pack	10 Pack	50 Pack
1/4"	.400"	Steel	ALL19211	ALL19213	ALL19224	ALL19225
5/16"	.500"	Aluminum	ALL19276	ALL19278	ALL19277	ALL19279
5/16"	.500"	Steel	ALL19214	ALL19215	ALL19226	ALL19227
7/16"	.400"	Aluminum	ALL19280	ALL19282	ALL19281	ALL19283
7/16"	.400"	Steel	ALL19216	ALL19218	-	-
7/16"	.500"	Aluminum	ALL19286	ALL19288	ALL19284	ALL19285
7/16"	.500"	Steel	ALL19220	ALL19222	ALL19228	ALL19229
7/16"	.550"	Aluminum	ALL19290	ALL19292	ALL19291	ALL19293
7/16"	.550"	Steel	ALL19230	ALL19232	ALL19231	ALL19233
7/16"	.600"	Aluminum	-	-	ALL19294	ALL19295



Oversized Oval Head			Silver		Black	
Body Size	Length	Material	10 Pack	50 Pack	10 Pack	50 Pack
7/16"	.500"	Aluminum	ALL19287	ALL19289	ALL19168	ALL19169
7/16"	.500"	Steel	ALL19221	ALL19223	ALL19170	ALL19171



Oval Head Allen			Silver		Black	
Body Size	Length	Material	10 Pack	50 Pack	10 Pack	50 Pack
5/16"	.500"	Steel	ALL19152	ALL19153	-	-
5/16"	.550"	Steel	ALL19154	ALL19155	-	-
7/16"	.500"	Aluminum	ALL19172	ALL19173	ALL19176	ALL19177
7/16"	.500"	Steel	ALL19162	ALL19163	-	-
7/16"	.550"	Steel	ALI 19164	ALI 19165	_	_



Oversized Oval Head Allen		Silver		Black		
Body Size	Length	Material	10 Pack	50 Pack	10 Pack	50 Pack
7/16"	.500"	Aluminum	ALL19180	ALL19181	ALL19178	ALL19179



Ov	Oval Head T-30 Torx			ver	Black	
Body Size	Length	Material	10 Pack	50 Pack	10 Pack	50 Pack
7/16"	.500"	Aluminum	ALL19071	ALL19072	ALL19073	ALL19074
7/16"	.550"	Aluminum	ALL19075	ALL19076	ALL19077	ALL19078





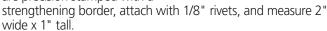
Tyler Roahrig



Quick Turn Starter Kit ALL19410 Not sure where to start when using quick turn fasteners? Use this kit as a starting point to determine correct fasteners for application. Kit includes two different lengths of Allstar's most popular oval head 7/16" fasteners (five ALL19280 and five ALL19286), ten ALL19330 springs and twenty-five multi-grip rivets.

Body Reinforcing Plates

Plates help protect fiberglass and aluminum panels from cracking when using 7/16" quick turn fasteners. Stainless steel plates are precision stamped with a



ALL18985	Natural, 10-Pack
ALL18985-50	Natural, 50-Pack
ALL18986	Black, 10-Pack
ALL18986-50	Black, 50-Pack

TECH TIP

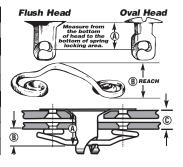
Quick Turn Fastener Measurement Guidelines

To find (A) Fastener Length, add together (B) Spring Reach and (C) Material Thickness (including bracket if applicable). A=B+C

Quick Turn Fastener Selection

- Determine the total thickness of the panels being joined, including mounting brackets and the space between the panels, if any.
- Select the proper body length and spring height combination that provides the proper thickness range.

		Fastener Length "A"				
		.400"	.450"	.500"	.550"	.600"
<u>=</u>	1" Springs		Total Ma	aterial Thick	ness "C"	
Length "B"	.250"	.165"200"	.215"250"	.265"300"	.315350"	.365"400"
gt	.325"	.098"133"	.148"183"	.198"233"	.248"283"	.348"383"
Le	1-3/8" Springs					
စ်	.325"	.105"148"	.155"198"	.205"248"	.255"298"	.355"398"
Spring	.375"	.055"098"	.105"148"	.155"198"	.205"248"	.305"348"
S	.425"	.005"048"	.055"098"	.105"148"	.155"198"	.255"298"







Chad Boat Racing

Mike Motycka



Quick Turn Springs



ALL19407

	10-Pack	50-Pack		
1-3/8" (.090" Wire Diameter)				
.325" Reach	ALL19320	ALL19322		
.375" Reach	ALL19330	ALL19332		
.425" Reach	ALL19336	ALL19338		
1" (.080" Wire Diame	ter)			
.250" Reach	ALL19300	ALL19302		
.325" Reach	ALL19310	ALL19312		
3/4" (.062" Wire Diameter)				
.200" Reach	ALL19296	ALL19298		

Quick Turn Spring Fixture

Accurately drill panels when installing quick turn fastener springs. Start with a 1/4" center hole and use the fixture to locate and drill 1/8" holes for mounting the springs. Size listed is spring center-to-center distance.

ALL19406 Fixture For 3/4" Spring ALL19407 Fixture For 1" Spring ALL19408 Fixture For 1-3/8" Spring

Quick Turn Spring Adjuster ALL19405

This tool is a must when adjusting tension of quick turn springs. Simply turn knob on adjuster to evenly pull or push spring without kinking or breaking spring.

Transfer Punches

For use with quick turn fasteners, place transfer punch in a weld plate or body panel. Position panel over top of punch and lightly tap with a hammer to leave a mark on the panel where hole is to be drilled.

ALL19402 For 5/16" Fasteners **ALL19403** For 7/16" Fasteners

Quick Turn Wrench ALL19400

The Allstar quick turn fastener wrench fits slot head fasteners and reduces the risk of body panel or fastener damage when using screwdrivers for loosening or tightening. Features a non-slip handle.



Mounting Brackets For 1" Springs (.0625" Thick)





Description	10-Pack	50-Pack
Weld-on, Lightweight	ALL19364	ALL19366
Weld-on Lightweight w/.250" Spring	ALL19365	ALL19367
Weld-on	ALL19340	ALL19342
Weld-on w/ALL19300 Spring	ALL19350	ALL19352

Mounting Brackets For 1" And 1-3/8" Springs (.0625" Thick)









Description	10-Pack	50-Pack
Weld-on, Lightweight (For 1-3/8" Spring Only)	ALL19360	ALL19362
Weld-on, Lightweight w/.375" Spring	ALL19361	ALL19363
Weld-on LH	ALL19380	ALL19382
Weld-on RH	ALL19384	ALL19386
Rivet-on LH	ALL19390	ALL19392
Rivet-on RH	ALL19394	ALL19396



Corey Ausra



Phil Ausra

Justin Pauley



Clamp-On **Quick Turn Fastener Brackets**

These cool brackets allow you to clamp a guick turn bracket to round tubing. Allows a flush mount bracket behind a panel without grinding your powder coat. Designed

for use with 1-3/8" quick turn

springs, insert plates or threaded nut inserts. Black anodized.

ALL19430 1"	ALL19433 1-1/2"
ALL19431 1-1/4"	ALL19434 1-5/8"
ALL19432 1-3/8"	ALL19435 1-3/4"

Related Components

ALL19330 Quick Turn Spring 1-3/8" (Most Popular) ALL19422 Quick Turn Insert Plate, 1/4" - 20 Thread ALL18547 Threaded Nut Insert, Steel, 1/4"- 20 Thread ALL18548 Threaded Nut Insert, Aluminum, 1/4" - 20 Thread





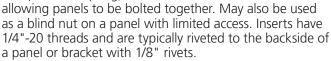






Quick Turn Fastener Insert Plates

Insert plate directly replaces the quick turn spring,



ALL19420	1", 2-Pack
ALL19420-10	1", 10-Pack
ALL19420-50	1", 50-Pack
ALL19422	1-3/8", 2-Pack
ALL19422-10	1-3/8", 10-Pack
ALL19422-50	1-3/8", 50-Pack

Threaded Insert Tool Kit

ALL19450

Tool works with a cordless drill to install a threaded insert into a panel or bracket. Inserts are

helpful when the backside of the panel is not easily accessible. Simply drill the correct size hole, install the threaded insert onto the mandrel, then place the insert into the hole and tighten using any cordless drill. Once the insert is compressed, reverse the drill and remove the mandrel from the insert. Kit includes mandrel and nosepiece for 1/4"-20, 5/16"-18 and 3/8"-16 inserts, other sizes available separately. Threaded inserts

Replacement Parts

sold separately.

ALL19452 Mandrel and Nosepiece for 8-32 ALL19453 Mandrel and Nosepiece for 10-24 ALL19454 Mandrel and Nosepiece for 10-32 ALL19455 Mandrel and Nosepiece for 1/4"-20 ALL19456 Mandrel and Nosepiece for 5/16"-18 ALL19457 Mandrel and Nosepiece for 3/8"-16



Δ1119454

Threaded Inserts

Steel inserts are helpful when the backside of the panel is not easily accessible. Inserts work great for

frequently removed items including gauge panels, switch

panels, access panels, and body panels, or when mounting items to trailer walls. Inserts are designed for installation using insert tool ALL19450 with coordinating mandrel and nosepiece. Package of 10.



	Thread	Pilot Hole	Grip	Body Length
Part No.	Size	Size	Range	(Before Comp.)
ALL19460	8-32	17/64"	Up To .080"	.420"
ALL19461	10-24	5/16"	Up To .130"	.475"
ALL19462	10-32	5/16"	Up To .130"	.475"
ALL19463	1/4"-20	13/32"	Up To .165"	.580"
ALL19465	5/16"-18	17/32"	Up To .150"	.690"
ALL19467	3/8"-16	17/32"	Up To .150"	.690"





Randy Adler

Seth Chaney



Aluminum Washer Countersunk Bolt Kits

finished look. Many uses

Kit includes specially designed aluminum washers which allow the socket head fasteners to install flush with the surface creating a smooth



NEW 3/4" OD WASHER KITS

skirts, spoilers and replacing sharp edged fasteners inside cockpit. Kits include washers, bolts and nyloc nuts.

Bolt Size	Washer O.D.	Finish	10-Pack	50-Pack		
Countersur	Countersunk Bolt Kits					
#10-24 x 1"	1"	Clear	ALL18630	ALL18630-50		
#10-24 x 1"	1"	Black	ALL18631	ALL18631-50		
1/4"-20 x 1"	3/4"	Clear	ALL18628	ALL18628-50		
1/4"-20 x 1"	3/4"	Black	ALL18629	ALL18629-50		
1/4"-20 x 1"	1"	Clear	ALL18632	ALL18632-50		
1/4"-20 x 1"	1"	Black	ALL18633	ALL18633-50		
1/4"-20 x 1"	1-1/4"	Clear	ALL18634	ALL18634-50		
1/4"-20 x 1"	1-1/4"	Black	ALL18635	ALL18635-50		

Aluminum Washers

Storage Cases These handy storage cases help organize many items around the shop, trailer or home such as electrical connectors, quick turn fasteners, tire groover blades, small fasteners and many more

NEW 3/4" OD WASHERS

Washer I.D. x O.D.	Finish	10-Pack	50-Pack			
Countersunk Alum	Countersunk Aluminum Washers					
#10 x 1"	Clear	ALL18660	ALL18660-50			
#10 x 1"	Black	ALL18661	ALL18661-50			
1/4" x 3/4"	Clear	ALL18658	ALL18658-50			
1/4" x 3/4"	Black	ALL18659	ALL18659-50			
1/4" x 1"	Clear	ALL18662	ALL18662-50			
1/4" x 1"	Black	ALL18663	ALL18663-50			
1/4" x 1-1/4"	Clear	ALL18664	ALL18664-50			
1/4" x 1-1/4"	Black	ALL18665	ALL18665-50			
Flat Aluminum Backer Washers						
#10 x 1"	Clear	ALL18638	-			
1/4" x 1"	Clear	ALL18639	_			



ALL18660

Plastic Countersunk Bolt Kits

Kit includes specially designed plastic washers which allow the socket head fasteners to install flush with the surface creating a smooth finished look.

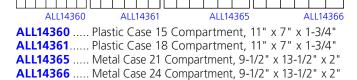
Many uses include mounting roofs, side skirts, spoilers and replacing sharp edged fasteners inside cockpit. Kits include washers, bolts and nyloc nuts.

	Washer			
Bolt Size	O.D.	Color	10-Pack	50-Pack
Countersur	nk Bolt Ki	ts		
1/4"-20 x 1"	1"	Black	ALL18680	ALL18680-50
1/4"-20 x 1"	1"	White	ALL18681	ALL18681-50
1/4"-20 x 1"	1"	Red	ALL18682	ALL18682-50
1/4"-20 x 1"	1"	Blue	ALL18683	ALL18683-50
1/4"-20 x 1"	1"	Orange	ALL18684	ALL18684-50
1/4"-20 x 1"	1"	Silver	ALL18685	ALL18685-50
1/4"-20 x 1"	1"	Pink	ALL18686	ALL18686-50
1/4"-20 x 1"	1"	Purple	ALL18687	ALL18687-50
1/4"-20 x 1"	1"	Fluorescent Yellow	ALL18688	ALL18688-50
1/4"-20 x 1"	1"	Fluorescent Orange	ALL18689	ALL18689-50

Washer			
O.D. x I.D.	Color	10-Pack	50-Pack
Countersur	nk Plastic Wa	shers	
1" x 1/4"	Black	ALL18690	ALL18690-50
1" x 1/4"	White	ALL18691	ALL18691-50
1" x 1/4"	Red	ALL18692	ALL18692-50
1" x 1/4"	Blue	ALL18693	ALL18693-50
1" x 1/4"	Orange	ALL18694	ALL18694-50
1" x 1/4"	Silver	ALL18695	ALL18695-50
1" x 1/4"	Pink	ALL18696	ALL18696-50
1" x 1/4"	Purple	ALL18697	ALL18697-50
1" x 1/4"	Fluorescent Yellow	ALL18698	ALL18698-50
1" x 1/4"	Fluorescent Orange	ALL18699	ALL18699-50



Shannon Babb



items. Curved bottom compartments create a smooth scoop, making it easy to remove the smallest of items. Molded-in dividers prevent items from slipping under

dividers and accidentally mixing product.



ALL18655

ALL18561

Body Bolt Kits

Bolts are designed for easy installation and removal, have 1/4"-20 thread and a built-in captured washer. Nuts have built-in serrations which prevent loosening. Body bolts are commonly used to fasten body panels and side skirts for easy removal but may be used anywhere a bolt with a captured washer is needed.



Body Bolts

These bolts are the same bolts found in our body bolt kits but



without nuts. Bolts have 1/4"-20 threads and a built-in captured washer. Bolts are commonly used to fasten body panels and side skirts for easy removal, used anywhere a bolt with a captured washer is needed.

Under-Head Length	Color	10-Pack	50-Pack
3/4"	Black	ALL16550	ALL16550-50
3/4	Silver	ALL16552	ALL16552-50
	Black	ALL16553	ALL16553-50
1-1/8"	Gold	ALL16554	ALL16554-50
	Silver	ALL16555	ALL16555-50

Spin Lock Nuts

Nuts have a built-in washer with a serrated face to lock nut tight against panels. 1/4"-20 nuts are perfect to use as a backer nut with Allstar body bolts, nose bolts, and body stud kits.

Color	10-Pack	50-Pack
Black	ALL18555	ALL18555-50
Gold	ALL18556	ALL18556-50
Silver	ALL18557	ALL18557-50

Steel Fender Washers

ALL18216

Washers have 1/4" I.D., 1" O.D. and are sold 100 to a pack.





Kit allows the clip to stay fastened to body panel or angle bracing when removing body panels for maintenance or cleaning. 1/4"-20 thread bolts are 1-1/8" UHL and have a built-in captured washer.

Bolt Color	10-Pack	50-Pack
Black	ALL18558	ALL18558-50
Clear	ALL18656	ALL18656-50
Gold	ALL18559	ALL18559-50



Body Bolt Clips

Steel clips have built-in 1/4"-20 threads making them ideal for often removed panels or when the backside is not easily accessible. Clips feature a friction tab to hold clips firmly in place on panels up to 3/16" thick. Dimension listed is center of hole to edge of clip (depth).

Depth	10-Pack	50-Pack
1/2"	ALL18554	ALL18554-50
3/4"	ALL18564	ALL18564-50

Aluminum Body Bolt Washers

1-1/4" O.D. aluminum washers work with most body bolts to increase the surface area, preventing pull-through while providing a smooth finished, look. Washers



are 1/8" thick and have a built-in pocket to accept most body bolts or other washer headed fasteners up to 3/4" in diameter.

Finish	10-Pack	50-Pack
Clear	ALL18840	ALL18840-50
Black	ALL18841	ALL18841-50

Plastic Body Bolt Washers

1-1/4" O.D. plastic washers work with most body bolts to increase the surface area, preventing pull-through while providing a smooth, finished look. Washers are 1/8" thick and have a built-in pocket to accept most body bolts or other washer headed fasteners up to 3/4" in diameter.





Color	10-Pack	50-Pack
Black	ALL18845	ALL18845-50
White	ALL18846	ALL18846-50
Red	ALL18847	ALL18847-50
Blue	ALL18848	ALL18848-50
Orange	ALL18849	ALL18849-50
Silver	ALL18850	ALL18850-50
Pink	ALL18851	ALL18851-50
Purple	ALL18852	ALL18852-50
Fluorescent Yellow	ALL18853	ALL18853-50
Fluorescent Orange	ALL18854	ALL18854-50

Steve Arpin



Flush Mount Bolts

1/4"-20 flush mount bolts have a 1"
O.D. beveled head to provide a smooth finished appearance and are slotted for installation with a standard screwdriver. Excellent choice when securing body panels, roof panels, nose supports, spoiler sides and many other uses. Size noted is under head length. Package of 10.





Length	Steel	Aluminum	Black Aluminum
3/4"	ALL18640	ALL18641	ALL18642
1"	ALL18645	ALL18646	ALL18647
1-1/4"	ALL18650	ALL18651	ALL18652

Threaded Nut Insert

Insert provides a convenient option to quickly install and easily remove a 1/4"-20 fastener on panels up to 1/8" thick. Insert fits into a 3/8" O.D. hole and is held in place on the backside with a steel serrated locking nut. Internal threads accept fasteners ideal for mounting dash panels, access panels, body panels, electrical components or other accessories.

Insert Material	2-Pack	10-Pack	50-Pack
Steel	ALL18547	ALL18547-10	ALL18547-50
Aluminum	ALL18548	ALL18548-10	ALL18548-50

Button Head Bolts





Common bolts provide a nice finished look to your project.

Size	Length	Pkg Qty	Black	Stainless
8-32	1/2"	25	ALL16936	ALL16920
10-24	1/2"	25	ALL16938	ALL16922
1/4"-20	1/2"	25	ALL16940	ALL16924
1/4"-20	3/4"	25	ALL16941	ALL16925
5/16"-18	1"	10	ALL16944	_
3/8"-16	1"	10	ALL16946	_

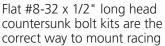
Quick Turn Fastener Insert Plates

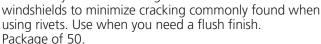
Insert Plates
Insert plate directly replaces

the quick turn spring allowing panels to be bolted together or used as a blind nut on a panel with limited access. Inserts have 1/4"-20 threads and are typically riveted to the backside of a panel or bracket with 1/8" rivets.

ALL19420	1", 2-Pack
ALL19420-10	1", 10-Pack
ALL19420-50	1", 50-Pack
ALL19422	1-3/8", 2-Pack
ALL19422-10	1-3/8", 10-Pack
ALL19422-50	1-3/8", 50-Pack

Windshield Mounting Kit





ALL16914..... Stainless ALL16930 Black

Set Screws

Standard cup point set screws are manufactured from alloy steel and heat treated for maximum holding power. Common replacements for oil pump pulleys, coil over kits and many other applications. Package of 10.

ALL16902 #10-24 x 3/8" ALL16903 #10-32 x 3/8" ALL16905 1/4"-20 x 1/4" ALL16907 1/4"-20 x 3/4"

Ludwig Clamps ALL18232

Clamps are used to secure access panels, deck lids and a variety of other items in place. Zinc plated carbon steel clamps have a 3/16" mounting hole allowing clamp to be bolted or riveted in place. Package of 4.

Socket Head Bolts Coarse Thread Grade 5



Socket head bolts are coarse thread, grade 5. Package of 5.

Length	1/4"-20	5/16"-18	3/8"-16	7/16"-14	1/2"-13
3/4"	ALL16731	ALL16741	ALL16751	-	-
1"	ALL16732	ALL16742	ALL16752	ALL16762	ALL16772
1-1/2"	ALL16734	ALL16744	ALL16754	ALL16764	ALL16774
2"	ALL16736	ALL16746	ALL16756	ALL16766	ALL16776



Hex Head Bolts - Coarse Thread Grade 5



Length	1/4"-20	5/16"-18	3/8"–16	7/16"-14	1/2"-13	5/8"-11	3/4"-10
3/4"	ALL16201	ALL16221	ALL16241	_	ALL16281	_	_
1"	ALL16202	ALL16222	ALL16242	ALL16262	ALL16282	_	_
1-1/4"	ALL16203	ALL16223	ALL16243	ALL16263	ALL16283	_	_
1–1/2"	ALL16204	ALL16224	ALL16244	ALL16264	ALL16284	_	-
1-3/4"	ALL16205	ALL16225	ALL16245	ALL16265	ALL16285	_	_
2"	ALL16206	ALL16226	ALL16246	ALL16266	ALL16286	ALL16316	ALL16336
2-1/4"	-	_	_	-	ALL16287	_	_
2-1/2"	ALL16208	ALL16228	ALL16248	ALL16268	ALL16288	ALL16318	ALL16338
2-3/4"	_	-	-	-	ALL16289	-	_
3"	ALL16210	_	ALL16250	ALL16270	ALL16290	ALL16320	ALL16340
3-1/2"	ALL16211	_	_	ALL16271	ALL16291	ALL16321	_
4"	ALL16212	_	ALL16252	ALL16272	ALL16292	ALL16322	ALL16342
4-1/2"	ALL16213	_	_	ALL16273	ALL16293	_	_
5"	ALL16214	_	ALL16254	_	ALL16294	ALL16324	ALL16344
6"	-	_	ALL16256	-	ALL16296	ALL16326	ALL16346
6-1/2"	_	_	_	-	_	_	ALL16347
7"	_	_	ALL16258	_	ALL16298	_	ALL16348
7–1/2"	-	_	_	_	_	_	ALL16349
8"	_		_	_	-	_	ALL16350

Hex Head Bolts - Fine Thread Grade 5



	1/4"-28	5/16"-24	3/8"-24	7/16"-20	1/2"-20	5/8"-18	3/4"–16
Length	Part No.						
1"	ALL16402	ALL16422	ALL16442	ALL16462	ALL16482	_	_
1–1/2"	ALL16404	ALL16424	-	ALL16464	ALL16484	-	_
2"	ALL16406	ALL16426	ALL16446	ALL16466	ALL16486	-	ALL16536
2-1/2"	-	-	-	ALL16468	ALL16488	ALL16518	ALL16538
3"	_	_	_	ALL16470	ALL16490	ALL16520	ALL16540
3–1/2"	-	-	-	-	-	-	ALL16541
4"	-	_	-	ALL16472	ALL16492	ALL16522	ALL16542
5"	-	-	_	ALL16474	ALL16494	_	ALL16544
6"	_	_	_	ALL16476	_	_	ALL16546

Titanium Bolts

Titanium bolts have a dimpled low profile hex head and are available in a variety of fine and coarse thread lengths.







Titanium Hex Head Bolts - Fine Thread

Length	7/16"–20	1/2"–20	5/8"–18	3/4"–16
1-1/4"	ALL17463	_	_	_
1-3/4"	_	_	ALL17515	_
2"	_	ALL17486	ALL17516	_
2-1/4"	_	_	ALL17517	_
2-1/2"	_	ALL17488	ALL17518	_
2-3/4"	_	ALL17489	ALL17519	ALL17539
3"	_	ALL17490	ALL17520	ALL17540
3-1/4"	_	ALL17491	ALL17521	ALL17541
3-1/2"	-	ALL17492	ALL17522	ALL17542
4-1/4"	_	ALL17495	_	-
4-1/2"	_	ALL17496	_	_
5-1/2"	ALL17475	-	-	-
6"	ALL17476	_	_	ALL17549
7"	-	_	ALL17531	-
7-1/4"	_	_	_	ALL17552

Length	5/16"–18	7/16"–14	1/2"-13	5/8"–11
3/4"	ALL17221	_	_	_
1"	ALL17222	_	_	_
1-1/4"	ALL17223	_	_	_
1–1/2"	_	ALL17264	_	_
1-3/4"	_	_	ALL17285	ALL17315
2"	_	_	ALL17286	ALL17316
2-1/4"	_	_	ALL17287	ALL17317
2-1/2"	_	_	ALL17288	ALL17318
2-3/4"	_	_	ALL17289	_
3"	_	_	ALL17290	_
3-1/2"	_	_	ALL17291	_



Hex Nuts And Washers













 Nut
 Nylon Insert
 Thin Nylon Insert
 Mechanical Lock Nut
 Flange Nut

 1/4"-20
 5/16"-18
 3/8"-16
 7/16"-14
 1/2"-13

Coarse Thread	1/4"–20	5/16"–18	3/8"–16	7/16"–14	1/2"-13	5/8"–11	3/4"–10
Nut, 10-Pack	ALL16000-10	ALL16001-10	ALL16002-10	ALL16003-10	ALL16004-10	ALL16005-10	ALL16006-10
Nut, 50-Pack	ALL16000-50	ALL16001-50	ALL16002-50	ALL16003-50	ALL16004-50	-	_
Nylon Insert, 10-Pack	ALL16010-10	ALL16011-10	ALL16012-10	ALL16013-10	ALL16014-10	ALL16015-10	ALL16016-10
Nylon Insert, 50-Pack	ALL16010-50	ALL16011-50	ALL16012-50	ALL16013-50	ALL16014-50	-	_
Thin Nylon Insert, 10-Pack	ALL16020-10	ALL16021-10	ALL16022-10	ALL16023-10	ALL16024-10	ALL16025-10	ALL16026-10
Mech. Lock Nut, 10-Pack	ALL16030-10	ALL16031-10	ALL16032-10	ALL16033-10	ALL16034-10	ALL16035-10	ALL16036-10
Flange Nut, 10-Pack	ALL18557	ALL16041-10	ALL16042-10	ALL16043-10	ALL16044-10	ALL16045-10	_

Fine Thread	1/4"-28	5/16"-24	3/8"-24	7/16"-20	1/2"-20	5/8"-18	3/4"-16
Nut, 10-Pack	ALL16050-10	ALL16051-10	ALL16052-10	ALL16053-10	ALL16054-10	ALL16055-10	ALL16056-10
Nylon Insert, 10-Pack	ALL16060-10	ALL16061-10	ALL16062-10	ALL16063-10	ALL16064-10	ALL16065-10	ALL16066-10
Thin Nylon Insert, 10-Pack	ALL16070-10	ALL16071-10	ALL16072-10	ALL16073-10	ALL16074-10	ALL16075-10	ALL16076-10
Mech. Lock Nut, 10-Pack	ALL16080-10	ALL16081-10	ALL16082-10	ALL16083-10	ALL16084-10	ALL16085-10	ALL16086-10

Washers	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"
USS Flat*, 25-Pack	ALL16100-25	ALL16101-25	ALL16102-25	ALL16103-25	ALL16104-25	ALL16105-25	ALL16106-25
SAE Flat*, 25-Pack	ALL16110-25	ALL16111-25	ALL16112-25	ALL16113-25	ALL16114-25	ALL16115-25	ALL16116-25
Lock, 25-Pack	ALL16120-25	ALL16121-25	ALL16122-25	ALL16123-25	ALL16124-25	ALL16125-25	ALL16126-25
Lock For SHCS, 25-Pack	ALL16130-25	ALL16131-25	ALL16132-25	ALL16133-25	ALL16134-25	_	_
AN, 25-Pack	ALL16150-25	ALL16151-25	ALL16152-25	ALL16153-25	ALL16154-25	-	-

^{*}USS washers have a larger O.D. than SAE washers

Steel Jam Nut Assortments

Assortments contain five each of 1/4"-20, 5/16"-24, 3/8"-24, 7/16"-20, 1/2"-20, 5/8"-18 and 3/4"-16.

ALL18290 35 Asst. RH Jam Nuts **ALL18291** 35 Asst. LH Jam Nuts

Jam Nuts - Standard Hex

Allstar jam nuts have many uses. Great for locking rod ends tightly on suspension tubes or rack and pinion steering units. Package of 4, unless noted.

Thread	Wrench	Steel	Aluminum
1/4"-28 RH	7/16"	ALL18250	-
1/4"-28 LH	7/16"	ALL18251	-
5/16"-24 RH	1/2"	ALL18252	-
5/16"-24 LH	1/2"	ALL18253	_
3/8"-24 RH	9/16"	ALL18254	ALL18274
3/8"-24 LH	9/16"	ALL18255	ALL18275
7/16"-20 RH	11/16"	ALL18256	ALL18276
7/16"-20 LH	11/16"	ALL18257	ALL18277
1/2"-20 RH	3/4"	ALL18258	ALL18278
1/2"-20 LH	3/4"	ALL18259	ALL18279
5/8"-18 RH	15/16"	ALL18260	ALL18280
5/8"-18 LH	15/16"	ALL18261	ALL18281
3/4"-16 RH	1-1/8"	ALL18262	ALL18282
3/4"-16 LH	1-1/8"	ALL18263	ALL18283
3/4"-10 RH	1-1/8"	ALL18264†‡	_
7/0" O DII	1 5/16"	ALL18266 [†]	
7/8"-9 RH	1-5/16"	(Sway Bar Adj.)	_
1 " O DI I	1 1/2 "	ALL56110 [†]	
1"-8 RH	1-1/2"	(Jack Bolt)	_



Jam Nuts - Small Hex

Specialty jam nuts have smaller outside diameters, allowing smaller wrenches to be used when changing radius rod lengths. Example: with 1/2" bolts, the same 3/4" wrench can be used to adjust radius rod or mounting hole locations. Package of 4.

Thread Size	Wrench Size	Steel	Alum.	Black Alum.
5/8"-18 RH	3/4"	ALL18292	ALL18296	ALL18286
5/8"-18 LH	3/4"	ALL18293	ALL18297	ALL18287
3/4"-16 RH	15/16"	ALL18294	ALL18298	ALL18288
3/4"-16 LH	15/16"	ALL18295	ALL18299	ALL18289

Spin Lock Nuts

Nuts have a built-in washer with a serrated face to lock nut tight against panels. 1/4"-20 nuts are perfect to use as a backer nut with Allstar body bolts, nose bolts, and body stud kits.

Color	10-Pack	50-Pack
Black	ALL18555	ALL18555-50
Gold	ALL18556	ALL18556-50
Silver	ALL18557	ALL18557-50

Black Half Nuts ALL17048

Black plated steel 1/2"-20 nylon lock nuts are grade 8 and a lightweight option to keep fasteners in place. Package of 10.





Tapered Spacers

Universal spacers have many uses including spacing rod ends on linkages to prevent binding or just to provide clearance. Spacers provide a finished look when fitting body panels or spacing components away from floors and firewalls. Package of 2.

I.D.	Small O.D.	Large O.D.	Length	Steel	Aluminum
			1/4"		ALL18700
1/4"	.345	.500	1/2"	_	ALL18702
-/4.011			1/4"	_	ALL18706
5/16"	.475	.625	1/2"	_	ALL18708
			1/4"	_	ALL18712
3/8"	.525	.680	1/2"	_	ALL18714
			1"	_	ALL18716
			1/4"	ALL18570	ALL18590
			3/8"	ALL18571	_
1/2"	.740	.995	1/2"	ALL18572	ALL18592
1/2	./40	.995	3/4"	ALL18574	ALL18594
			1"	ALL18576	ALL18596
			1-1/2"	ALL18578	ALL18595
			1/4"	ALL18580	ALL18597
			1/2"	ALL18582	ALL18598
5/8"	.825	.995	3/4"	ALL18584	ALL18599
			1"	ALL18586	_
			1-1/2"	ALL18585	_
			1/2"	ALL18587	-
3/4"	.950	1.125	3/4"	ALL18588	-
			1"	AII 18589	_

Hourglass Spacers



Tired of simple spacers on your cool ride, these spacers look nice while also offering additional support on both ends. Package of 2.

	1/4" I.D.	5/16" I.D.	3/8" I.D.	1/2" I.D.
Length	1" O.D.	1" O.D.	1" O.D.	1-1/2" O.D.
1/4"	ALL18800	ALL18810	ALL18820	ALL18830
1/2"	ALL18802	ALL18812	ALL18822	ALL18832
1"	ALL18804	ALL18814	ALL18824	ALL18834
1-1/2"	ALL18806	ALL18816	ALL18826	ALL18836
2"	ALL18808	ALL18818	ALL18828	ALL18838

Aluminum Flat Spacers

Flat spacers are great for shimming and adding additional clearance to brackets for brake calipers, power steering, alternators, dry sump pumps, or just about anything to help with alignment issues. Package of 2.

Length	3/8" I.D. (11/16" O.D.)	1/2" I.D. (1" O.D.)
1/8"	ALL18740	ALL18760
1/4"	ALL18742	ALL18762
3/8"	ALL18744	ALL18764
1/2"	ALL18746	ALL18766

Rod End Reducer Bushings

Steel bushings reduce the rod end pivot ball I.D. to accept a smaller bolt size.



O.D. To I.D.	2-Pack	10-Pack
	Z-Pack	IU-Pack
1/2" To 3/8"	ALL18565	ALL18565-10
5/8" To 1/2"	ALL18566	ALL18566-10
3/4" To 1/2"	ALL18567	ALL18567-10
3/4" To 5/8"	ALL18568	ALL18568-10

High Misalignment Reducer Spacers

Dual purpose spacers reduce fastener size mounting hole and allow the rod end to rotate more than 30° in each direction which is 25% more than most standard

rotate more than 30° in each direction which is 25% more than most standard spacers. Stainless steel spacers resist rust and corrosion. Package of 2.



Rod End		O.D.	Length	Overall	De et Ne
Size	I.D.	"A"	"B"	Width "C"	Part No.
5/8"	1/2"	.750"	.465"	1.68"	ALL18785
3/4"	1/2"	.890"	.475"	1.825"	ALL18786
3/4"	5/8"	.890"	.475"	1.825"	ALL18787

5/8" Rod End Reducer Spacers

Reducer spacers fit into 5/8" rod ends, reducing the hole size for 1/2" hardware while also spacing the rod end away from chassis brackets. Standard

ALL18615



ALI 186

spacers are 3/4" O.D. and flanged spacers have 1" O.D. flanges to help support rod end. Size referenced indicates the amount of space between rod end pivot ball and chassis bracket. Package of 2.

Standard Spacers

ALL18615	Aluminum, 1/2"
ALL18617	Aluminum, 1"
ALL18618	Aluminum, 1-1/4"
ALL18619	Aluminum, 1-3/4"

Flanged Spacers

ALL18611...... Aluminum, 1/4" ALL18613..... Aluminum, 1/2" ALL18610..... Steel, 1/4" ALL18612..... Steel, 1/2"



Shock Spacers

Steel spacers have a 1/2" I.D. and 3/4" O.D. and can be used in a variety of other locations.



Length	2-Pack	10-Pack
1/4"	ALL64280	ALL64280-10
1/2"	ALL64282	ALL64282-10
5/8"	ALL64283	ALL64283-10
3/4"	ALL64284	ALL64284-10



Rod Ends

Two-piece spherical rod ends have a pivoting steel ball and are sold each.



Bore x Thread	RH Male	LH Male	RH Female	Strength
Standard Serie	s Steel			
1/4" x 1/4"-28	ALL58004	ALL58014	ALL58034	2,835 Lbs
5/16" x 5/16"-24	ALL58005	ALL58015	ALL58035	4,517 Lbs
3/8" x 3/8"-24	ALL58006	ALL58016	ALL58036	6,323 Lbs
1/2" x 1/2"-20	ALL58008	ALL58018	ALL58038	10,046 Lbs
5/8" x 5/8"-18	ALL58010	ALL58020	ALL58040	15,488 Lbs
3/4" x 3/4"-16	ALL58012	ALL58022	ALL58042	15,894 Lbs
3/4" x 3/4"-16	ALL58013 [†]	-	-	15,894 Lbs
Pro Series Stee	l (Moly) – Bl	ack		
1/2" x 1/2"-20	ALL58058	ALL58068	_	17,000 Lbs
1/2" x 5/8"-18	ALL58059	ALL58069	_	19,300 Lbs
5/8" x 5/8"-18	ALL58060	ALL58070	-	18,000 Lbs
3/4" x 3/4"-16	ALL58062	ALL58072	_	25,000 Lbs
Pro Series Stee	l (Moly) – Bl	ack (PTFE L	ined)	
1/2" x 1/2"-20	ALL58078*	ALL58083*		
1/2" x 5/8"-18	ALL58079	ALL58084	_	17,650 Lbs
5/8" x 5/8"-18	ALL58080	ALL58085	_	15,200 Lbs
3/4" x 3/4"-16	ALL58082	ALL58086	_	21,400 Lbs
Aluminum – Black				
1/2" x 1/2"-20	ALL58088	ALL58098	_	7,700 Lbs
1/2" x 5/8"-18	ALL58089	ALL58099	_	15,000 Lbs

tALL58013 has an oversized hole and is for use with steering shaft tubing.



Heavy Duty 3/4" Chrome Moly Rod Ends

Often referred to as "Aircraft-Style", these heavy duty 4130 chrome moly rod ends ALL99314 ALL99315 have larger bodies, making them thirty percent stronger than standard 3/4" rod ends. These rod ends are commonly used on Panhard bars and lower strut rods.

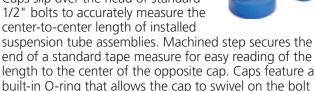
ALL99314 RH Male, 3/4" x 3/4"-16 ALL99315 RH Female, 3/4" x 3/4"-16

3/4" Solid Rod End ALL58112

Solid rod ends are built using 1045 steel and are then chrome plated for added wear resistance. End has a body width of .875" to match the width of standard rod ends.

Bolt Center Caps ALL10678

Caps slip over the head of standard center-to-center length of installed



head and keeps it from falling off. Package of 2.

Steel Shock Quick Pin ALL60108

Steel shock guick pins allow coil-over shocks to be guickly serviced or changed. Works with Allstar coil-over brackets, eliminating the need for a separate bushing. Shock guick pins are 2-1/2" long and include a hairpin. Sold each.

Titanium Shock Quick Pins

Titanium shock quick pins allow coil-over shocks to be guickly serviced or changed. ALL17120 has a long shoulder and will work with Allstar coil-over brackets, eliminating the need for a separate bushing. ALL17121 is commonly used on non-bushing type brackets, but can be used with Allstar brackets along with bushing. Shock guick pins are 2-1/2" long and include a hairpin.

ALL17120 Quick Pin With Shoulder ALL17121 Quick Pin Without Shoulder

Ouick Release T-Handle Pins

Positive lock quick release pins hold tightly in place until the handle button is depressed, allowing the pin to be inserted or removed into or out of a hole with ease. Handles are made from die cast 380 aluminum, shanks are made from 4130 steel. Each pin is equipped with a stainless steel split ring to

allow the attachment of a cable assembly.

ALL60300 1/4" x 1" ALL60314....3/8" x 3" **ALL60301** 1/4" x 1-1/2" ALL60318.... 1/2" x 2" **ALL60302** 1/4" x 2" ALL60320.... 1/2" x 2-1/2" **ALL60322**.... 1/2" x 3" ALL60304 5/16" x 1" **ALL60324**.... 1/2" x 3-1/2" ALL60306 5/16" x 2" ALL60308 5/16" x 3" ALL60326.... 5/8" x 2" **ALL60310** 3/8" x 1" ALL60328.... 5/8" x 2-1/2" ALL60312 3/8" x 2" ALL60330.... 5/8" x 3"

Ouick Pin Lock Collar

Steel lock collar provides a positive lock for quick release pins. Black coated collar with button head machine screw allows attachment of a securing device, like an Allstar lanyard (ALL18461 or ALL18463).

ALL60335 1/2" Collar With 10-32 Screw ALL60336 5/8" Collar With 1/4"-28 Screw





Lengths stated are from base of T-handle to top of detent ball.



ALL18512

ALL18514

1/2" Steel Hood Pin Kits

Kits include two each: 4" long x 1/2' diameter chrome steel pins, chrome steel scuff plates, clips, and four nuts.

Available with flip-over or hairpin-style clips.

ALL18512 Kit With 3/16"

Dia.

Flip-Over Clips **ALL18513**..... Kit With 1/4" Dia.

Flip-Over Clips

ALL18514..... Kit With 5/32" Dia.

Hairpin Clips

1/2" Aluminum Hood Pin Kits

Kits include two each: 4" x 1/2" diameter aluminum pins, aluminum scuff plates, flip over style, 1/4" diameter steel clips, and four nuts.
Clip flips over pin and overcenter action locks clip in place.



Color	Complete Kit	Pins Only, 1-Pair
Silver (Plain)	ALL18500	ALL18507
Red Anodized	ALL18501	ALL18508
Blue Anodized	ALL18502	ALL18509
Gold Anodized	ALL18503	ALL18510
Black Anodized	ALL18504	ALL18511

3/8" Aluminum Hood Pin Kits

Kits include two aluminum 3-1/2" x 3/8" diameter pins, two aluminum scuff plates, two flip over style 3/16" diameter steel clips, and four nuts. Clip flips over stud and locks into place.

Over-center action keeps clip in place.

Color	Complete Kit	Pins Only, 1-Pair
Silver (Plain)	ALL18480	ALL18487
Red Anodized	ALL18481	ALL18488
Blue Anodized	ALL18482	ALL18489
Black Anodized	ALL18484	ALL18491

Lightweight Hood Pin Kits

Kits include two 2-3/4" long gun-drilled aluminum pins, two clips, two lightweight aluminum plates and four steel jam nuts.



Color	Kit With 3/8" Pins	Kit With 1/2" Pins
Silver (Plain)	ALL18472	ALL18476
Black Anodized	ALL18473	ALL18477

Hood Pin Supports

Supports thread onto hood pins (before installation) and are a good alternative to sections of rubber hose commonly used to support hoods and deck lids. Once supports are in place, a set screw prevents movement. Supports work with Allstar Performance aluminum hood pins and other fully threaded hood pins. Package of 2.

ALL18478 3/8"-24 **ALL18479** 1/2"-20

Hood Pin Extensions

Aluminum extensions fit into existing chassis mounts. 1/2"-20 male to 1/2"-20 female, with 13/16" thread depth. Sold each.

ALL18524 1-3/4" Tall **ALL18525** 2-3/4" Tall

Hood Pin Adapters

Aluminum adapters convert existing chassis mounts over to hood pin mounts. Sold each.

ALL18526 Converts 1/2" Fine Hood Pin Mount To 3/8" Hood Pin, 1/2"-20 Male To 3/8"-24 Female

ALL18527..... Converts 1/2" Coarse Mount To 1/2" Hood Pin, 1/2"-13 Male To 1/2"-20 Female

Hood Pin Clips

The same quick removal pins and clips included with Allstar's hood pin kits. Hairpin clip has a rotated loop for easy grasp and the flip over clips have a loop with an over center locking feature that keeps pin in place. Package of 2.

ALL18506

ALL18516...... Hairpin Clip, 5/32" **ALL18515**..... Flip-Over Clip, 3/16" **ALL18506** Flip-Over Clip, 1/4"

Flip-Over Clip With Lanvard

Our most popular size flip-over clip commonly used with hood pins is now available with an added lanyard which fastens to body panel for easy installation and prevents lost clips. Sold each.

ALL18460 Clip With 6" Lanyard ALL18462 Clip With 10" Lanyard





Steel Lanyards



Steel lanyards feature 1/16" diameter cable with 3/4" loops on each end for light duty applications such as hood pins or retention of similar type fasteners to prevent loss.

ALL18461 6" Long **ALL18463** 10" Long

Nylon Lanyards ALL18468

Nylon lanyards feature a molded end with a 3/16" hole on one end and a snap together open loop on the other end to quickly and easily secure a variety of components. Once snapped together, loop is permanently locked. 10" long, package of 4.

Hair Pins

Zinc coated hair pins are formed from .093" diameter steel wire. Package of 2.

ALL18442 1-5/8" **ALL18444** 2-1/2"

Diaper Pins

Steel diaper pins are zinc coated. Sold each.

ALL18446 1-3/4", .060" Diameter **ALL18448** 2-3/4", .090" Diameter

Lock Pins

Use lock pin in place of a bolt for items that need to be removed frequently or easily. Wire loop folds over pin to lock in place. Size noted is under head length to end of pin. Sold each.

ALL18452 1/4" x 2" **ALL18454** 5/16" x 2-3/4"

Universal Line Clamps

Two-piece aluminum clamps dress up wiring or hard lines. Package of 4.

ALL18320 3/16" **ALL18321** 1/4" **ALL18322** 5/16" **ALL18323** 3/8"



Line Clamps

Aluminum clamps have a protective neoprene cushion to prevent abrasion and a 1/4" mounting hole

to secure electrical wiring, hoses or cables to a panel or frame.

Black nylon clamps have a 3/16" mounting hole to secure electrical wiring, hoses or cables to a panel or frame.

	Aluminum		Ny	lon
Clamp Size	10-Pack	50-Pack	10-Pack	50-Pack
1/8"	-	-	ALL18309	ALL18309-50
3/16"	ALL18300	ALL18300-50	ALL18310	ALL18310-50
1/4"	ALL18301	ALL18301-50	ALL18311	ALL18311-50
3/8"	ALL18302	ALL18302-50	ALL18312	ALL18312-50
1/2"	ALL18303	ALL18303-50	ALL18313	ALL18313-50
5/8"	ALL18304	ALL18304-50	ALL18314	ALL18314-50
3/4"	ALL18305	ALL18305-50	ALL18315	ALL18315-50
7/8"	ALL18306	ALL18306-50	_	_
1"	ALL18307	ALL18307-50	ALL18317	ALL18317-50
1-1/4"	ALL18308	ALL18308-50	_	_

Hose Clamps

Heavy duty all stainless steel construction clamps are easily tightened with a deep slot hex head screw. Superior to standard hardware store clamps.

Dout No.	Min O D	May O D
Part No.	Min O.D.	Max O.D.
2-Pack		
ALL18330	1/4"	5/8"
ALL18332	1/2"	1-1/8"
ALL18334	1"	2"
ALL18336	1-5/16"	2-1/4"
ALL18338	1-9/16"	2-1/2"
ALL18340	1-5/8"	3-1/2"
ALL18342	2-5/8"	4-1/2"
10-Pack		
ALL18330-10	1/4"	5/8"
ALL18332-10	1/2"	1-1/8"
ALL18334-10	1"	2"
ALL18336-10	1-5/16"	2-1/4"
ALL18338-10	1-9/16"	2-1/2"



T-Bolt Band Clamps

Stainless steel constructed band clamps provide a better sealing option over traditional hose clamps in performance applications. Clamps feature a 3/4" wide band and are sold in pairs.

Part No.	Min O.D.	Max O.D.
ALL18344	1-1/2"	1-3/4"
ALL18345	1-3/4"	2"
ALL18347	2"	2-3/8"
ALL18349	2-1/4"	2-5/8"
ALL18350	2-3/8"	2-3/4"
ALL18351	2-3/4"	3-1/4"
ALL18352	3″	3-3/8"
ALL18353	3-1/4"	3-5/8"
ALL18354	3-3/4"	4-1/4"
ALL18355	4-1/4"	4-5/8"





Aluminum AN To NPT Adapters



AN Size	NPT	Straight	45°	90°
-3	1/8"	ALL49502	ALL49532	ALL49562
-4	1/8"	ALL49505	ALL49535	ALL49565
-4	1/4"	ALL49506	ALL49536	ALL49566
-4	3/8"	ALL49507	ALL49537	ALL49567
-6	1/8"	ALL49508	ALL49538	ALL49568
-6	1/4"	ALL49509	ALL49539	ALL49569
-6	3/8"	ALL49510	ALL49540	ALL49570
-6	1/2"	ALL49511	ALL49541	ALL49571
-8	1/4"	ALL49512	ALL49542	ALL49572
-8	3/8"	ALL49513	ALL49543	ALL49573
-8	1/2"	ALL49514	ALL49544	ALL49574
-10	3/8"	ALL49517	ALL49547	ALL49577
-10	1/2"	ALL49518	ALL49548	ALL49578
-10	3/4"	ALL49519	ALL49549	ALL49579
-12	1/2"	ALL49520	ALL49550	ALL49580
-12	3/4"	ALL49521	ALL49551	ALL49581

Aluminum 90° Swivel To Male NPT

Part No.	NPT	AN Size
ALL49584	1/8"	-4
ALL49585	1/4"	-4
ALL49587	1/8"	-6
ALL49588	1/4"	-6
ALL49589	3/8"	-6
ALL49590	1/2"	-6
ALL49591	1/4"	-8
ALL49592	3/8"	-8
ALL49596	3/8"	-10
ALL49599	1/2"	-12



Aluminum AN Bulkhead Adapters

Part No.	A Size	B Size
Straight Bu	ılkhead	
ALL49610	-3	-3
ALL49611	-4	-4
ALL49612	-6	-6
ALL49613	-8	-8
ALL49614	-10	-10
ALL49615	-12	-12
ALL49616	-16	-16
90° Bulkhe	ad	
ALL49620	-3	-3
ALL49621	-4	-4
ALL49622	-6	-6
ALL49623	-8	-8
ALL49624	-10	-10
ALL49625	-12	-12
ALL49626	-16	-16
	·	·



A

Aluminum AN Bulkhead Nuts





Aluminum AN Flare Adapters

Part No.	A Size	B Size			
Female Swi	vel Union				
ALL49700	-3	-3			
ALL49701	-4	-4			
ALL49702	-6	-6			
ALL49703	-6	-8			
ALL49704	-8	-8			
ALL49705	-8	-10			
ALL49706	-10	-10			
Male Union		10			
ALL49710	-3	-3			
	-3 -4	-3 -4			
ALL49711	- 4 -6	-4			
ALL49712					
ALL49713	-8 -10	-8 -10			
ALL49714		-10			
ALL49715	-12	-12			
ALL49716	-16	-16			
90° Union					
ALL49720	-3	-3			
ALL49721	-4	-4			
ALL49722	-6	-6			
ALL49723	-8	-8			
ALL49724	-10	-10			
ALL49725	-12	-12			
Male Reduc	er				
ALL49730	-3	-4			
ALL49731	-4	-6			
ALL49732	-4	-8			
ALL49733	-4	-10			
ALL49734	-6	-8			
ALL49735	-6	-10			
ALL49736	-8	-10			
ALL49737	-8	-12			
ALL49738	-10	-12			
ALL49739	-12	-16			
Swivel Reducer					
ALL49740	-4	-3			
ALL49741	- 4 -6	-3 -4			
ALL49741	-8	-4			
ALL49743	-8	-6			
ALL49744	-10	-6			
ALL49745	-10	-8			
ALL49746	-10	-8			
ALL49746 ALL49747	-12	-10			
	-12				
ALL49748		-10			
ALL49749	-16	-12			
	e Expander				
ALL49750	-3	-4			
ALL49751	-4	-6			
ALL49752	-6	-8			
ALL49753	-8	-10			
ALL49754	-10	-12			
ALL49755	-12	-16			
ALL49756	-16	-20			













Aluminum AN Bulkhead Tee

Part No.	A Size	B Size	C Size	
Tee On-The-Side				
ALL49630	-3	-3	-3	
ALL49631	-4	-4	-4	
ALL49632	-6	-6	-6	
ALL49633	-8	-8	-8	
ALL49634	-10	-10	-10	





Aluminum AN Flare Tee

Part No.	A Size	B Size	C Size
Tee			
ALL49640	-3	-3	-3
ALL49641	-4	-4	-4
ALL49642	-6	-6	-6
ALL49643	-8	-8	-8
ALL49644	-10	-10	-10
ALL49645	-12	-12	-12
ALL49646	-16	-16	-16
Tee, Female	Swivel 0	n Side	
ALL49650	-3	-3	-3
ALL49651	-4	-4	-4
ALL49652	-6	-6	-6
ALL49653	-8	-8	-8





Part No.	AN Size			
Aluminum Flare Cap				
ALL49670	-3			
ALL49671	-4			
ALL49672	-6			
ALL49673	-8			
ALL49674	-10			
ALL49675	-12			
ALL49676	-16			
Aluminum Flare				
ALL49680	-3			
ALL49681	-4			
ALL49682	-6			
ALL49683	-8			
ALL49684	-10			
ALL49685	-12			
ALL49686	-16			
Aluminum Tube I	Nut, 2-Pack			
ALL50320	-3			
ALL50321	-4			
ALL50322	-6			
ALL50323	-8			
ALL50324	-10			
Aluminum Tube 	Sleeve, 2-Pack			
ALL50330	-3			
ALL50331	-4			
ALL50332	-6			
ALL50333	-8			
ALL50334	-10			











Part No.	A Size	B Size	C Size
ALL49760	-4	-4	1/8"
ALL49761	-6	-6	1/8"
ALL49762	-6 Fem.	-6	1/8"
ALL49763	3/8" Male	-6	1/8"
ALL49765	-8	-8	1/8"



ALL50201 1/8"NPT Female To -3AN **ALL50202** 1/8"NPT Female To -4AN



AN Flare To ORB Adapters

Part No.	A Size	B Size			
Aluminun	Aluminum O-Ring Boss				
ALL49830	3/8"-24 (-3)	-4			
ALL49831	7/16"-20 (-4)	-4			
ALL49832	9/16"-18 (-6)	-4			
ALL49833	3/4"-16 (-8)	-4			
ALL49834	7/8"-14 (-10)	-4			
ALL49836	9/16"-18 (-6)	-6			
ALL49837	3/4"-16 (-8)	-6			
ALL49838	7/8"-14 (-10)	-6			
ALL49839	1-1/16"-12 (-12)	-6			
ALL49841	9/16"-18 (-6)	-8			
ALL49842	3/4"-16 (-8)	-8			
ALL49843	7/8"-14 (-10)	-8			
ALL49844	1-1/16"-12 (-12)	-8			
ALL49845	1-5/16"-12 (-16)	-8			
ALL49847	3/4"-16 (-8)	-10			
ALL49848	7/8"-14 (-10)	-10			
ALL49849	1-1/16"-12 (-12)	-10			
ALL49850	1-5/16"-12 (-16)	-10			
ALL49852	3/4"-16 (-8)	-12			
ALL49853	7/8"-14 (-10)	-12			
ALL49854	1-1/16"-12 (-12)	-12			
ALL49855	1-5/16"-12 (-16)	-12			
ALL49857	1-1/16"-12 (-12)	-16			
ALL49858	1-5/16"-12 (-16)	-16			



NPT Adapters

Part No.	A Size	B Size
Aluminum N	IPT Reducer	
ALL49770	1/4"	1/8"
ALL49771	3/8"	1/8"
ALL49772	3/8"	1/4"
ALL49773	1/2"	1/8"
ALL49774	1/2"	1/4"
ALL49775	1/2"	3/8"
ALL49776	3/4"	1/4"
ALL49777	3/4"	3/8"
ALL49778	3/4"	1/2"



Part No.	NPT Size	Qty.		
Aluminum Male NPT Nipple				
ALL49780	1/8"	1		
ALL49781	1/4"	1		
Aluminum F	emale NPT Co	oupler		
ALL49785	1/8"	1		
Aluminum II	nternal Allen	NPT Plug		
ALL49800	1/16"	2		
ALL49801	1/8"	2		
ALL49802	1/4"	2		
ALL49803	3/8"	2		
ALL49804	1/2"	1		
ALL49805	3/4"	1		
Steel Interna	al Allen NPT F	Plug*		
ALL49811	1/8"	2		
ALL49812	1/4"	2		
ALL49813	3/8"	2		
ALL49814	1/2"	1		
Aluminum Hex NPT Plug				
ALL49820	1/8"	1		

3/8"











ALL49821

ALL49822

^{*}Larger quantities available





WARNING PROP. 65 (See Below)

NPT To AN Fittings

1/8"-27NPT steel fittings are commonly used when connecting braided lines to brake calipers, engine oiling systems, etc.





ALL50018 ALL50010 ALL50019 ALL50011



ALL50020



ALL50000 1/8"NPT Male To -3AN Straight, 2-Pack ALL50001 1/8"NPT Male To -4AN Straight, 2-Pack ALL50004..... 1/8"NPT Male To -4AN Straight, Tall **ALL50010** 1/8"NPT Male To -3AN 45 Deg.

ALL50011 1/8"NPT Male To -4AN 45 Deg. ALL50018 1/8"NPT Male To -3AN 90 Deg. ALL50019 1/8"NPT Male To -4AN 90 Deg.

ALL50020 1/8"NPT Male To -3AN 90 Deg. Tall ALL50021 1/8"NPT Male To -4AN 90 Deg. Tall ALL50199 1/8"NPT Female To -3AN

ALL50200 1/8"NPT Female To -4AN

NPT Fittings

Popular brass 1/8"-27NPT fittings used for a variety of applications.









ALL50182 1/8"NPT Plug, 4-Pack

ALL50184 1/8"NPT Male Union, 4-Pack ALL50185 1/8"NPT Female Union, 4-Pack

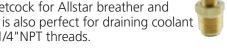
ALL50138 1/8"NPT Tee, 2-Pack ALL50139 1/8"NPT Tee, 2-Pack



ALL50139

Petcock ALL99030

Replacement petcock for Allstar breather and overflow tanks is also perfect for draining coolant from engines. 1/4"NPT threads.





WARNING: PROP. 65

The products on this page can expose you to lead, which is known to the State of California to cause cancer, birth defects or other reproductive harm. For more information, go to: www.P65Warnings.ca.gov

Caliper Fittings

Commonly used in stock type calipers in place of the banjo fitting and bolt. Fittings allow direct connection to a steel braided line. Fittings are sold in a pack of 2.











ALL50040

ALL50036

ALL50032

ALL50035

ALL50029 3/8"-24 To -3AN Straight ALL50030 3/8"-24 To -4AN Straight ALL50032 7/16"-20 To -4AN Straight ALL50035 7/16"-20 To -4AN 90 Deg. **ALL50037** 10mm – 1.50 To -3AN Straight ALL50036 10mm - 1.50 To -4AN Straight ALL50040 10mm - 1.50 To Female 1/8"-27NPT

Banjo Fittings

Banjo fittings are commonly used with banjo bolts and crush washers in stock type calipers to allow direct connection of a steel braided line and allow pivoting the line as needed. Fittings are sold in a pack of 2.

ALL50060 3/8" To -3AN ALL50061 3/8" To -4AN ALL50062 7/16" To -3AN ALL50063 7/16" To -4AN ALL50067 10mm To -3AN ALL50068..... 10mm To -4AN

ALL50066 10mm To -4AN Extended





ALI 50066

ALL50063

Banjo Bolts

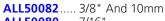
Banjo bolts are a drilled bolt to allow fluid to pass through and are commonly used with banjo fittings and crush washers in stock type calipers to allow direct connection of a steel braided line. Bolts are sold in a pack of 2.





Crush Washers

Crush washers are used when sealing metal to metal contact points of banjo fittings and bolts. Soft material conforms to the irregularities of the sealing surfaces. Washers are sold in a pack of 10.



ALL50080..... 7/16"



Bleeder Fitting With Screw ALL50180

Designed for popular aftermarket calipers, these fittings have 1/8"-27 threads and include a 1/4"-28 bleeder screw. Sold in a pack of 4.



Bleeder Caps ALL50855

Rubber caps keep dirt and moisture out of brake caliper bleeder screw fittings. Caps fit ALL50180 and most other popular small bleeder screws. Package of 10.

Inverted Flare Fittings

An inverted flare fitting is a common brake fitting designed to withstand the high pressures found in braking systems.











ALL50183









ALL50133

ALL50120 3/16" To Male 1/8"-27NPT Straight, 4-Pack ALL50125 3/16" To Male 1/8"-27NPT 90°, 4-Pack ALL50127 3/16" To Female 1/8"-27NPT, 4-Pack

ALL50136 3/16" Tee, 2-Pack

ALL50137 3/16" Tee w/1/8"-27NPT Port

ALL50135 3/16" Tee w/1/8"-27NPT Male Nipple On Side

ALL50183 3/16" Plug, 4-Pack ALL50130 3/16" Union, 4-Pack

ALL50121 1/4" To 1/8"-27NPT Straight, 4-Pack

ALL50129 1/4" To 5/16", 2-Pack ALL50131 1/4" Union, 4-Pack ALL50132 5/16" Union, 4-Pack ALL50133 3/8" Union, 4-Pack

Master Cylinder Adapter Fittings ALL41012

Fittings adapt master cylinders or combination valves with 1/2"-20 and 9/16"-18 ports to accept 3/16" inverted flare brake line with standard 3/8"-24 fittings. Kit includes one of each fitting.



WARNING: PROP. 65

The products on this page can expose you to lead, which is known to the State of California to cause cancer, birth defects or other reproductive harm. For more information, go to: www.P65Warnings.ca.gov

Bolt-In Adapter Fittings

Bulkhead style aluminum fittings adapt 3/16" inverted flare line to an AN type fitting. The 9/16" threaded body with attaching nut can be mounted through a C-channel style frame or a chassis tab.

ALL50104 3/16" To 3AN ALL50105 3/16" To 4AN ALL60092 Weld-On Tabs, 4-Pack



Clip-In Adapter Fittings

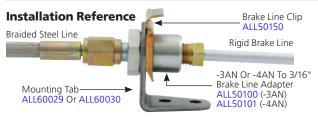
Steel adapter fittings provide a bulkhead style connection to AN lines that can be mounted directly to the chassis by using tabs or brackets and retainer clips. Fittings fit in a 5/8" hole and are sold in a pack of 2.

ALL50100 3/16" Inverted Flare To -3AN ALL50101 3/16" Inverted Flare To -4AN **ALL50102** 1/8"-27NPT To -3AN ALL50103 1/8"-27NPT To -4AN ALL60029 Bolt-on Tabs 2-Pack ALL60030 Weld-on Tabs 4-Pack ALL50150 Retainer Clip 4-Pack



ALL60029 ALL60030

TECH TIP



D.O.T. Legal **Brake Hose Kits**

Kit includes everything necessary to complete the connection between 3/16" steel brake line and the brake caliper for one axle. Kits include two brake line adapter fittings, steel weld on tabs, retainer clips, banjo caliper fittings, banjo bolts, crush washers, and 16" DOT approved #3 braided steel hoses.

ALL42032 GM Metric Kit With 10mm-1.50 Caliper Bolts ALL42033 Big GM Kit With 7/16"-20 Caliper Bolts

Brake Hose Kits

Kit includes everything necessary to complete the connection between 3/16" steel brake line and the brake caliper for one axle. Kits include two brake line adapter fittings, steel weld on tabs, retainer clips, banjo caliper fittings, banjo bolts, crush washers, and 15" #3 braided steel hoses.

ALL42025 GM Metric Kit With 10mm-1.50 Caliper Bolts ALL42027 Big GM Kit With 7/16"-20 Caliper Bolts



Braided Steel Lines

A wide selection of braided steel lines in various lengths. All lines come with one straight end and your choice of straight, 45° or 90° on the other end. The inner PTFE hose is compatible with all brake fluids. The braided stainless steel outer covering resists abrasion and corrosion. Ideal for use where bending and flexing occurs. More durable than rubber hose. Lengths stated are overall end-to-end, including fittings.

Note: Lines are also available in 5-pack and 25-pack quantities. Add a (-5) or (-25) to end of part number. Example ALL46400-6-25 for a 25-pack. Lengths stated are overall end-to-end, including fittings. Lines are NOT D.O.T. approved.

#3 Braided Steel Lines With -3 Ends

		-3 Straight And	-3 Straight And	-3 Straight And
Length	Two -3 Straight	-3 45°	-3 90° Forged	-3 90° Tube
6"	ALL46300-6	_	ALL46302-6	ALL46304-6
9"	ALL46300-9	-	ALL46302-9	ALL46304-9
10"	ALL46300-10	_	ALL46302-10	ALL46304-10
12"	ALL46300-12	-	ALL46302-12	ALL46304-12
14"	ALL46300-14	ALL46301-14	ALL46302-14	ALL46304-14
15"	ALL46300-15	ALL46301-15	ALL46302-15	ALL46304-15
16"	ALL46300-16	ALL46301-16	ALL46302-16	ALL46304-16
18"	ALL46300-18	ALL46301-18	ALL46302-18	ALL46304-18
20"	ALL46300-20	_	ALL46302-20	ALL46304-20
21"	ALL46300-21	_	ALL46302-21	ALL46304-21
22"	ALL46300-22	_	ALL46302-22	ALL46304-22
24"	ALL46300-24	ALL46301-24	ALL46302-24	ALL46304-24
26"	ALL46300-26	_	ALL46302-26	ALL46304-26
28"	ALL46300-28	_	ALL46302-28	ALL46304-28
30"	ALL46300-30	_	ALL46302-30	ALL46304-30
32"	ALL46300-32	-	ALL46302-32	ALL46304-32
34"	ALL46300-34	ALL46301-34	_	_
36"	ALL46300-36	_	ALL46302-36	ALL46304-36
40"	ALL46300-40	_	_	_
42"	ALL46300-42	-	ALL46302-42	ALL46304-42
43"	ALL46300-43	_	_	_
44"	ALL46300-44	-	-	-
47"	ALL46300-47	_	_	_
48"	ALL46300-48	-	ALL46302-48	ALL46304-48
50"	ALL46300-50	-	-	_
60"	ALL46300-60	-	ALL46302-60	ALL46304-60
108"	ALL46300-108	-	-	_
120"	ALL46300-120	-	-	_
180"	ALL46300-180	_	_	_







	" - Pidided Pteel Eilies IIIti Eilies			
		-4 Straight And	-4 straight And	-4 Straight And
Length	Two -4 Straight	-4 45°	-4 90° Forged	-4 90° Tube
6"	ALL46400-6	_	ALL46402-6	ALL46404-6
9"	ALL46400-9	_	ALL46402-9	ALL46404-9
10"	ALL46400-10	-	ALL46402-10	ALL46404-10
12"	ALL46400-12	_	ALL46402-12	ALL46404-12
14"	ALL46400-14	_	ALL46402-14	ALL46404-14
15"	ALL46400-15	ALL46401-15	ALL46402-15	ALL46404-15
16"	ALL46400-16	_	ALL46402-16	ALL46404-16
18"	ALL46400-18	ALL46401-18	ALL46402-18	ALL46404-18
20"	ALL46400-20	_	ALL46402-20	ALL46404-20
21"	ALL46400-21	_	ALL46402-21	ALL46404-21
22"	ALL46400-22	_	ALL46402-22	ALL46404-22
24"	ALL46400-24	ALL46401-24	ALL46402-24	ALL46404-24
26"	ALL46400-26	_	ALL46402-26	ALL46404-26
28"	ALL46400-28	-	ALL46402-28	ALL46404-28
30"	ALL46400-30	_	ALL46402-30	ALL46404-30
32"	ALL46400-32	_	ALL46402-32	ALL46404-32
36"	ALL46400-36	_	ALL46402-36	ALL46404-36
42"	ALL46400-42	-	ALL46402-42	ALL46404-42
48"	ALL46400-48	_	ALL46402-48	ALL46404-48
60"	ALL46400-60	_	ALL46402-60	ALL46404-60
90"	ALL46400-90	_	_	_
120"	ALL46400-120	-	ALL46402-120	ALL46404-120
180"	ALL46400-180	_	_	_







Coated Braided Steel Lines With Steel Ends

Black coated braided steel lines with steel ends. Choose #3 or #4 line in straight/straight or straight/ 90° configurations. Lengths stated are overall, end-to-end.

	#3 Line		#4 Line	
Length	Two -3 Straight	-3 90° and -3 Straight	Two -4 Straight	-4 90° and -4 Straight
12"	ALL48430-12	ALL48434-12	ALL48440-12	ALL48444-12
15"	ALL48430-15	ALL48434-15	ALL48440-15	ALL48444-15
18"	ALL48430-18	ALL48434-18	ALL48440-18	ALL48444-18
21"	ALL48430-21	ALL48434-21	ALL48440-21	ALL48444-21
24"	ALL48430-24	ALL48434-24	ALL48440-24	ALL48444-24
30"	ALL48430-30	ALL48434-30	ALL48440-30	ALL48444-30
36"	ALL48430-36	ALL48434-36	ALL48440-36	ALL48444-36



Coated Braided Steel Lines With Aluminum Ends

Black coated braided steel lines have black aluminum ends. Choose #2, #3 or #4 line in straight/straight or straight/ 90° configurations. Lengths stated are overall, end-to-end.



	#2 Line	#3 Line		#4 Line	
Length	Two -3 Straight	Two -3 Straight	-3 90° and -3 Straight	Two -4 Straight Ends	-4 90° And -4 Straight
6"	ALL48385	ALL48387	ALL48413	ALL48349	ALL48398
9"	ALL48386	ALL48388	ALL48414	ALL48350	ALL48399
12"	ALL48371	ALL48361	ALL48415	ALL48351	ALL48400
15"	ALL48372	ALL48362	ALL48416	ALL48352	ALL48401
18"	ALL48373	ALL48363	ALL48417	ALL48353	ALL48402
21"	ALL48374	ALL48364	ALL48418	ALL48354	ALL48403
24"	ALL48375	ALL48365	ALL48419	ALL48355	ALL48404
30"	ALL48376	ALL48366	ALL48420	ALL48356	ALL48405
32"	-	ALL48367	_	-	_
36"	ALL48378	ALL48368	ALL48422	ALL48358	ALL48407
40"	ALL48384	ALL48389	ALL48426	ALL48390	ALL48427
46"	_	_	ALL48394	_	_
48"	ALL48379	ALL48369	ALL48423	ALL48359	ALL48408
52"	_	ALL48392	_	_	_
60"	ALL48380	ALL48370	ALL48424	ALL48360	ALL48409
62"	_	ALL48393	_	_	_
73"	ALL48383	ALL48382	ALL48425	ALL48381	ALL48410

#6 Coated Braided Steel Lines With Aluminum Ends

Black coated braided steel lines have black aluminum ends. Lengths stated are overall, end-to-end.

Length	Two -6 Straight	-6 90° & -6 Straight
12"	ALL48465-12	ALL48466-12
24"	ALL48465-24	ALL48466-24
36"	ALL48465-36	ALL48466-36
72"	ALL48465-72	_
120" (10 ft.)	ALL48465-120	_
192" (16 ft.)	ALL48465-192	_



Quick Disconnect Couplings

2-piece couplings allow lines to be separated without loss of fluid or requirement of bleeding. Commonly used on brake systems when changing front or rear axle assembly, hydraulic wing cylinders, a hydraulic clutch system using a hydraulic throw out

ALL50212

ALL50209

ALI 50215

bearing or when servicing a transmission with an internal hydraulic clutch.

ALL50215 Steel Coupling With 1/8"NPT Female Threads ALL50212 Alum. Coupling With -3AN Male Threads ALL50213 Alum. Coupling With -4AN Male Threads ALL50209 Premium Coupling Fitting With -3AN Male Threads



Bill Balog



#3 Braided Steel Lines With -4 Ends

Length	Two -4 Straight Ends	-4 90° And -4 Straight
9"	ALL46310-9	ALL46312-9
12"	ALL46310-12	ALL46312-12
15"	ALL46310-15	ALL46312-15
18"	ALL46310-18	ALL46312-18
21"	ALL46310-21	ALL46312-21
24"	ALL46310-24	ALL46312-24
28"	ALL46310-28	ALL46312-28
32"	ALL46310-32	ALL46312-32
36"	ALL46310-36	ALL46312-36
42"	ALL46310-42	ALL46312-42
48"	ALL46310-48	ALL46312-48
60"	ALL46310-60	ALL46312-60
120"	ALL46310-120	ALL46312-120



Braided Steel Lines With 10mm Banjo Fitting

	#3 I	#4 Line	
Length	-3 Straight -4 Straight		-4 Straight
18"	ALL46340-18	_	ALL46440-18
21"	_	-	ALL46440-21
24"	_	ALL46341-24	ALL46440-24
44"	ALL46340-44	_	_



#4 Braided Steel Lines With 1/8"NPT And Straight -4 Ends

Length	Part No.
18"	ALL46420-18
24"	ALL46420-24
30"	ALL46420-30
36"	ALL46420-36
48"	ALL46420-48



#3 Braided Steel Lines With 3/16" Inverted Flare 90° And Straight -3 Ends

Length	Part No.
24"	ALL46332-24
36"	ALL46332-36
48"	ALL46332-48



Bulkhead Fittings

Black anodized aluminum bulkhead adapter fittings are perfect when plumbing needs to pass through a firewall, interior panel or a mounting bracket.

ALL50092 Straight -3AN to -3AN ALL50093 Straight -4AN to -4AN ALL50094 90 Degree -3AN to -3AN ALL50095 90 Degree -4AN to -4AN ALL50096 Tee (Run) -3AN (3x) ALL50097 Tee (Run) -4AN (3x) ALL50098 -3AN Bulkhead Nut ALL50099 -4AN Bulkhead Nut



90 Degree Swivel Fitting

Black anodized aluminum fitting swivels a full 360° for convenient hose connection. 1/8"NPT fitting is commonly used in aftermarket calipers, gauge panels or anywhere a swivel connection would be useful.

ALL50108 1/8"NPT to -3AN **ALL50109** 1/8"NPT to -4AN



AN Union Fittings

Black anodized aluminum flare union adapter fittings are commonly used to connect two hoses with female AN ends.

ALL50090..... -3AN to -3AN **ALL50091**..... -4AN to -4AN



Bulkhead Mounting Tab ALL60093

One-piece steel mounting tab with 7/16" hole can be bolted to the chassis or rear end to hold bulkhead fittings in place. Bracket is 5/64" thick.



Clutch Line Kits

Designed to connect clutch master cylinder to hydraulic throw-out bearing or directly to transmissions with internal clutches. Pre-assembled braided steel hose assemblies have #3 lines and are fitted with one -3AN straight end and one 3/16" inverted flare 90° hard line end. Also includes one 1/8" male to -3AN fitting (ALL50000).

ALL46100-24...Kit With 24" Line **ALL46100-36**...Kit With 36" Line **ALL46100-48** ..Kit With 48" Line

Universal Clutch Line Kit ALL46101-36

Universal kit includes a variety of fittings to connect most master cylinders to a hydraulic slave cylinder, throw-out bearing or to an internal clutch transmission. Kit includes an 8" long 3/16" hard line, a straight and



90 degree male 1/8" NPT to 3/16" inverted flare fittings, a straight female 1/8" NPT to 3/16" inverted flare fitting, two straight male 1/8" NPT to -4 hose fittings, a 36" #4 braided steel hose with -4AN fittings and line clamps for the steel and braided line.

D.O.T. Legal Brake Hose Kits

Kit includes everything necessary to complete the connection between 3/16" steel brake line and the brake caliper for one axle. Kits include two brake line adapter fittings, steel weld on tabs, retainer clips, banjo caliper fittings, banjo bolts, crush washers, and 16" DOT approved #3 braided steel hoses.

ALL42032..... GM Metric Kit With 10mm-1.50 Caliper Bolts **ALL42033**..... Big GM Kit With 7/16"-20 Caliper Bolts

Brake Hose Kits

Kit includes everything necessary to complete the connection between 3/16" steel brake line and the brake caliper for one axle. Kits include two brake line adapter fittings, steel weld on tabs, retainer clips, banjo caliper fittings, banjo bolts, crush washers, and 15" #3 braided steel hoses.

ALL42025 GM Metric Kit With 10mm-1.50 Caliper Bolts **ALL42027** Big GM Kit With 7/16"-20 Caliper Bolts

Dirt Race Car Brake Line Kit

Kit allows braided lines to be run throughout a dirt race car. Includes all lines needed to reach from the calipers to inside the foot box. Due to brand preference and location of pedals, master cylinders and brake shut off, the specific fittings and lines to complete plumbing inside the foot box

area will need to be purchased separately.

Concerned about brake pressure? This kit uses #3 line size for stiffer pedal feel while utilizing the more popular -4AN ends.

ALL42052..... Kit For Dirt Modifieds With OEM Calipers **ALL42053**..... Kit For Dirt Modifieds With Aftermarket Calipers **ALL42054**..... Kit For Dirt Late Models With Aftermarket Calipers

Rear End Brake Line Kit (Single Line Drop)

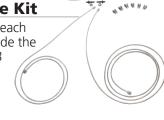
Kit is designed to eliminate "hanging" brake

lines near the rear calipers. Rear brake line kits utilize a single line drop located near the left side of the center section. From the drop, the lines tee and run over the top backside of the center section, then across the backside of axle tubes to the calipers. Kit includes braided lines (#3 line with -4AN ends), -4AN tee, 3" axle tube clamp bracket and a tee bracket.

ALL42056.. Kit For Dirt Modifieds (60" Wide) With OEM Calipers **ALL42057..** Kit For Dirt Modifieds (60" Wide) W/Aftermarket Calipers **ALL42058..** Kit For Dirt Late Models (62" Wide) W/Aftermarket Calipers

Front End Brake Line Kit

Kits include braided lines to reach from the front calipers to inside the foot box. Braided lines are #3 size with -4AN ends. The #3 line size offers a stiffer pedal feel while utilizing the more popular -4AN ends.



ALL42060..... Kit For Dirt Modifieds With OEM Calipers **ALL42061**..... Kit For Dirt Modifieds With Aftermarket Calipers **ALL42062**..... Kit For Dirt Late Model With Aftermarket Calipers Note: Visit our website for specific components used in these kits!

Gauge Line Kits

Gauge line kits provide easy connection to most mechanical oil and fuel pressure gauges. Includes a pre-assembled length of #4 braided steel line with -4AN ends and male and

female 1/8"NPT adapters to work with most applications.

ALL46110-36 Kit With 36" Line **ALL46110-48** Kit With 48" Line **ALL46110-60** Kit With 60" Line **ALL46110-72** Kit With 72" Line





Steel Brake Line

Steel brake line is available in lengths from 8" to 72" for plumbing brake systems. Standard galvanized zinc



Length	3/16" Line With 3/8"-24 Ends
8"	ALL48048
12"	ALL48050
20"	ALL48052
30"	ALL48054
40"	ALL48056
51"	ALL48058
60"	ALL48060
72"	ALL48062

Stainless Steel Brake Line

304 Grade stainless steel line has been double annealed for easier bending and flaring. Pre-made lines exceed SAE and DOT requirements and include standard size stainless flare nuts for years of service and show quality finish.



Length	3/16" Line With 3/8"-24 Ends	1/4" Line With 7/16"-24 Ends
8"	ALL48300	ALL48310
12"	ALL48301	ALL48311
20"	ALL48302	ALL48312
30"	ALL48303	ALL48313
40"	ALL48304	ALL48314
51"	ALL48305	ALL48315
60"	ALL48306	ALL48316
72"	ALL48307	ALL48317

Hard Brake Line Display Rack

ALL052

Display, organize, and inventory many lengths of 3/16" steel brake line. Rack measures 17" wide, and has 21 slots which hold 6 pieces each. Pre-punched mounting holes provide easy mounting on wall or display fixture. Not for use with braided brake lines.

Tubing Cutters

Cut plastic, aluminum, copper or steel tubing without distorting or crushing. Standard cutter works with tubing from 1/8" up to 1-1/8" and has wide rollers for even tracking of cutter wheel, built in reamer for cleaning inside of tubing and an extra cutting wheel. Mini cutter can cut tubing from 1/8" to 5/8" in tight areas.

ALL11010..... Mini ALL11011 Standard

Coiled Tubing

Coiled tubing works great for building 1 piece custom fuel lines without unions. Stainless steel tubing is 304 grade and double annealed for easy flaring and bending. Tubing does not include flare nuts (sold separately).

Part No.	Size	Material	Length
ALL48040	3/16"	Steel (Zinc Coated)	25'
ALL48308	3/16"	Stainless	20'
ALL48326	1/4"	Steel (Zinc Coated)	25'
ALL48318	1/4"	Stainless	20'
ALL48327	5/16"	Steel (Zinc Coated)	25'
ALL48320	5/16"	Stainless	20'
ALL48328	3/8"	Steel (Zinc Coated)	25'
ALL48322	3/8"	Stainless	20'

Inverted Flare Nuts

Flare nuts are used for building custom hard brake lines, transmission cooler lines, oil lines and fuel lines. 3/16" and 1/4" nuts are available to fit most master cylinder and metering/proportioning valve applications. Select proper thread size for line used. Colors listed may vary.

Part No.	Size	Color	Qty.			
Flare Nuts For	Flare Nuts For 3/16" Line					
ALL50110	3/8"-24	Zinc Plated	10-Pack			
ALL50111	3/8"-24	Stainless	10-Pack			
ALL50113	7/16"-24	Red	2-Pack			
ALL50114	1/2"-20	Green	2-Pack			
ALL50115	9/16"-18	Olive	2-Pack			
Flare Nuts For	Flare Nuts For 1/4" Line					
ALL50116	7/16"-24	Zinc Plated	10-Pack			
ALL50117	7/16"-24	Stainless	10-Pack			
ALL50118	1/2"-20	Gold	2-Pack			
ALL50119	9/16"-18	Blue	2-Pack			
Flare Nuts For	Flare Nuts For 5/16" Line					
ALL50140	1/2"-20	Zinc Plated	10-Pack			
ALL50141	1/2"-20	Stainless	4-Pack			
Flare Nuts For	Flare Nuts For 3/8" Line					
ALL50142	5/8"-18	Zinc Plated	10-Pack			
ALL50143	5/8"-18	Stainless	4-Pack			

Steel Tube Nut And Sleeve

Tube nuts and sleeves are used when making hard line connections to male AN fittings. Line requires a 37° flare for proper sealing. Package of 4.

ALL50300..... -3AN Tube Nut ALL50310 - 3AN Tube Sleeve





ALL50310

Aluminum Tube Nuts And Sleeves

Aluminum tube nuts and sleeves are used with ALL50320 corresponding hard lines to connect to male AN fittings. Line requires a 37° flare for proper sealing. Package of 2.

ALL50330

Size (Female)	For Tubing O.D.	Tube Nut	Tube Sleeve
-3	3/16"	ALL50320	ALL50330
-4	1/4"	ALL50321	ALL50331
-6	3/8"	ALL50322	ALL50332
-8	1/2"	ALL50323	ALL50333
-10	5/8"	ALL50324	ALL50334

ALL11010



Double Flare Tool

ALL11015

Double flares 3/16", 1/4", 5/16", 3/8" and 1/2" steel or aluminum and .040" copper tubing at 45°, the most common flare used in custom brake and fuel lines. Includes detailed instructions and a convenient plastic storage case.



Brake Line Kit ALL48030

Quickly plumb any race car using an Allstar nylon brake line kit. Kit extends from the master cylinder to the caliper and includes 35' of 3/16" line, compression ends, unions, tees and 1/8"NPT fittings. Race proven for years. Not for street use.



Universal Line Clamps

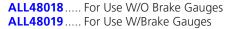
Two-piece aluminum clamps dress up wiring or hard line. Package of 4.

ALL18320 3/16" ALL18321...... 1/4" ALL18322 5/16" ALL18323 3/8" Nylon



Deluxe Nylon Brake Line Kits

Deluxe kits feature push lock fittings to ease installation. Kits include 30' of 3/16" line and fittings. Not for street use.





Aluminum Line Clamps

Aluminum clamps have a protective neoprene cushion to prevent abrasion and a 1/4" mounting hole to secure electrical wiring, hoses or cables to a panel or frame.

Clamp Size	10-Pack	50-Pack
3/16"	ALL18300	ALL18300-50
1/4"	ALL18301	ALL18301-50
3/8"	ALL18302	ALL18302-50
1/2"	ALL18303	ALL18303-50
5/8"	ALL18304	ALL18304-50
3/4"	ALL18305	ALL18305-50
7/8"	ALL18306	ALL18306-50
1"	ALL18307	ALL18307-50
1-1/4"	ALL18308	ALL18308-50



3/16" Nylon Brake Line

ALL48026..... 10' **ALL48027**..... 50' **ALL48028**..... 100'



3/16" Nylon Brake Line Compression Fittings



ALL48032





ALL48034





Nylon Line Clamps

Black nylon clamps have a 3/16" mounting hole to secure electrical wiring, hoses or cables to a panel or frame.

Clamp Size	10-Pack	50-Pack
1/8"	ALL18309	ALL18309-50
3/16"	ALL18310	ALL18310-50
1/4"	ALL18311	ALL18311-50
3/8"	ALL18312	ALL18312-50
1/2"	ALL18313	ALL18313-50
5/8"	ALL18314	ALL18314-50
3/4"	ALL18315	ALL18315-50
1"	ALL18317	ALL18317-50



ALL48032 1/8"-27NPT Male To 3/16" Straight **ALL48033** 1/8"-27NPT Male To 3/16" 90°

ALL48034..... 3/16" Union

ALL48035..... 3/16" Tee, All Compression ALL48036..... 3/16" Captured End Caps, 10-Pack

3/16" Nylon Brake Line Push Lock Fittings



ALL48020



ALL48021





22 ALL48023

ALL48020..... 1/8"-27NPT Male To 3/16" **ALL48021**..... 1/8"-27NPT Female To 3/16" **ALL48022**..... 3/16" Tee, All Push Lock

ALL48023 3/16" Tee, Two Pushlock And One 1/8"-27NPT Male



Aluminum Fuel Line

Allstar aluminum fuel line is seamless and available in three diameters, 25' coil.

ALL40180 3/8" Dia. **ALL40185** 1/2" Dia. ALL40186 5/8" Dia.



Fuel Cell Hose

Clear vent and filler hose is ideal for Circle Track cars. Sold in pre-cut lengths of 5', 10' and 20'.



Description	5'	10'	20'
1" I.D. Vent Hose	ALL40160-5	ALL40160-10	ALL40160-20
1-1/4" I.D. Vent Hose	ALL40161-5	ALL40161-10	ALL40161-20
1-1/2" I.D. Vent Hose	ALL40162-5	ALL40162-10	ALL40162-20
2-1/4" I.D. Filler Hose	ALL40168-5	ALL40168-10	ALL40168-20
2-1/2" I.D. Filler Hose	ALL40170-5	ALL40170-10	ALL40170-20

Caps And Plugs

A must for keeping debris out of lines and hoses. Ideal for keeping internal components of dry sump pumps, fuel pumps, pressure regulators, etc. clean during storage. Caps and plugs fit 37° flared fittings and straight threaded ports. Available in plastic and aluminum.

Сар	Plug	AN Size	Thread Size	No. Per Pkg.		
Plastic Caps And Plugs						
ALL50801	ALL50811	-3	3/8"-24	20		
ALL50802	ALL50812	-4	7/16"-20	20		
ALL50803	ALL50813	-6	9/16"-18	20		
ALL50804	ALL50814	-8	3/4"-16	20		
ALL50805	ALL50815	-10	7/8"-14	10		
ALL50806	ALL50816	-12	1-1/16"-12	10		
ALL50807	ALL50817	-16	1-5/16"-12	10		
ALL50808	ALL50818	-20	1-5/8"-12	5		
Aluminum	Caps And	Plugs				
ALL50821	ALL50831	-3	3/8"-24	20		
ALL50822	ALL50832	-4	7/16"-20	20		
ALL50823	ALL50833	-6	9/16"-18	20		
ALL50824	ALL50834	-8	3/4"-16	20		
ALL50825	ALL50835	-10	7/8"-14	10		
ALL50826	ALL50836	-12	1-1/16"-12	10		
ALL50827	ALL50837	-16	1-5/16"-12	10		

Cap And Plug Kits

Kits include five of each size, -3 to -16.

ALL50800 Plastic Cap Kit ALL50810 Plastic Plug Kit ALL50820 Aluminum Cap Kit **ALL50830**..... Aluminum Plug Kit



Grommet Set ALL18360

Grommets are perfect for protecting wiring and hoses that pass through panels up to 1/16" (.062") thick. Kit includes 36 grommets (6 of each size: 1/4" 5/16", 3/8", 1/2", 5/8" and 11/16"). Grommets are also available in size specific 10-packs.

Part No.	Grommet Hole I.D.	Panel Hole I.D.
ALL18362	3/16"	5/16"
ALL18363	1/4"	3/8"
ALL18364	5/16"	7/16"
ALL18365	3/8"	1/2"
ALL18366	1/2"	5/8"
ALL18367	5/8"	7/8"
ALL18368	11/16"	1"

Vacuum Line

Premium vacuum line resists kinking and is pliable for easy routing. Often used when connecting sensors, vacuum advance units, windshield washers or replacing existing

cracked, leaking vacuum lines. Size indicated is I.D. of hose.

ALL40340 5/32", 5' Long ALL40341 5/32", 50' Long ALL40342..... 7/32", 5' Long ALL40343 7/32", 50' Long

Fuel Line

Premium fuel line is reinforced to help prevent kinking and is rated up to 50 PSI for use with carbureted applications. Fuel line has many other uses, including connecting PCV valves, coolant overflow tanks, and vent lines for transmissions and differentials. Line is compatible with gasoline, E-85, diesel and biodiesel. Size indicated is I.D. of hose.

ALL40350 1/4", 3' Long ALL40351 1/4", 25' Long ALL40353 5/16", 3' Long ALL40354 5/16", 25' Long ALL40356 3/8", 3' Long ALL40357 3/8", 25' Long	
Fuel Line Kits	1
Dual feed fuel line kits	

ALL26156

ALL26166

Dual feed fuel line kits include the correct fittings and hoses to properly plumb single carburetor applications when connecting to AN style fitting. Line kits also include a capped -4AN fitting

which can be easily connected to a fuel pressure gauge. Kits are offered with -6AN or -8AN lines and fittings.

Application	СТоС	Carb Thread	Red/ Blue	Black
-6 Holley (4150 Series)	9-5/16"	7/8"-20	ALL26154	ALL26164
-8 Holley (4150 Series)	9-5/16"	7/8"-20	ALL26156	ALL26166
-8 Holley (4150 Series)*	9-5/8"	7/8"-20	ALL26159	ALL26169
-8 Holley Ultra HP (4150 Series)	9-5/8"	3/4"-16	_	ALL26165
-8 Holley Dominator (4500 Series)	11-5/8"	7/8"-20	ALL26158	ALL26168
-8 BG Demon	9-5/8"	9/16"-24	ALL26157	ALL26167

^{*}Designed for carburetors with custom metering block including Willy's and KB.



Fuel Logs

Fuel logs efficiently provide fuel to most 4150 series Hollev style carburetors with 7/8"-20 inlet threads and standard metering



ALL26153

blocks. Choose log with a -8AN male inlet fitting or -8 barbed inlet fitting for use with push lock hose. Logs have 1/2"NPT and 1/8"NPT plugs which can be removed when installing a return line or fuel pressure gauge.

ALL26152 Fuel Log With -8AN Barbed Inlet Fitting ALL26153 Fuel Log With -8AN Male Inlet Fitting

Aluminum Carb Fittings

Convert Holley carburetors with 7/8"-20 threads, Holley Ultra HP with 3/4"-16 ORB threads or BG/Demon style with 9/16"-24 threads to an AN style connection. Anodized aluminum fittings simplify plumbing fuel systems and building custom fuel lines. Fittings sold each.



Fittings With:	Blue	Black
Female -6AN End Holley (7/8"-20)	ALL50890	ALL50892
Male -6AN End Holley (7/8"-20) Short	ALL50894	ALL50896
Female -8AN End Holley (7/8"-20)	ALL50900	ALL50902
Female -8AN End Holley HP (3/4"-16 ORB)	_	ALL50907
Female -8AN End BG/Demon (9/16"-24)	ALL50901	_
Male -8AN End Holley (7/8"-20) Short	ALL50904	ALL50906
Male -8AN End Holley (7/8"-20)	ALL50905	_

Replacement Component

ALL50910 Sealing Washer for 7/8" Fittings, 10-Pack

GM T.P.I. **Fuel Injection Fittings**



Special tube O-ring fittings convert GM Tuned Port Injection fuel systems to -6AN fittings.

ALL50950 TPI Return Fitting, 14mm-1.50 **ALL50951** TPI Inlet Fitting, 16mm-1.50

Sprint Wing Line Kit

ALL48006

Kit includes lightweight, coated, braided stainless steel lines and aluminum fittings to help simplify plumbing of KSE Gen2 steering gear and wing cylinder.



Kit includes (2) #4 slider lines (22" long and 36" long), (2) #4 pressure and return lines (18" long), (4) 45° -4AN to 1/8"NPT valve fittings, (2) 90° -4AN to 1/8"NPT cylinder fittings and (2) high-flow -3 ORB to -4AN fittings.

Power Steering Hose Kits

Kits include hose and fittings to properly install a remote reservoir style power steering pump to most cars. Steering box fittings are sold separately.



Front Mount Kits - O.E. Style Location With Pump Mounted To Front Of Engine

ALL48204..... Kit For Stock Type Gear Box (Modified, Street Stock)

ALL48200..... Kit For Rack And Pinion Steering

Rear Mount Kits - Pump Mounted To Bell Housing Mounted Dry Sump Pumps, Fuel Pumps, etc.

ALL48201 Kit For Rack And Pinion ALL48205 Kit For Steering Box

Power Steering Hose

The same quality hose included in our power steering hose kits, available in a variety of lengths for building custom power steering lines or making repairs. Hose is suitable for most steering applications.



Power Steering Hose

ALL48270-3.... -6, 3' Long **ALL48270-6** ... -6, 6' Long ALL48270-10.. -6, 10' Long ALL48270-15 .. -6, 15' Long ALL48270-20.. -6, 20' Long

Stainless Hose

ALL48275-3.... -10, 3' Long ALL48275-6 ... -10, 6' Long

Power Steering Hose Ends

The same quality hose ends included in Allstar's power steering hose kits for building custom power steering lines or making repairs. Fittings are suitable for most steering applications.



-6 Hose Ends (Steel)

ALL48271 Straight **ALL48272** 45° ALL48273 90°

-10 Hose Ends (Aluminum)

ALL48276 Straight ALL48277 45° ALL48278 90° ALL48279 120°



ALL48278

ALL48272



Power Steering Box Fittings

Allstar fittings convert most power steering boxes and racks to -6AN fitting.



ALL48215 ALL48217

O-Ring Style Fittings

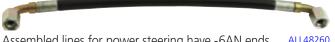
ALL48210*...-6AN Male To 16mm Fitting With O-Ring ALL48211.....-6AN Male To 14mm Fitting With O-Ring ALL48212*...-6AN Male To 18mm Fitting With O-Ring ALL48214....-6AN Male To 9/16"-18 Fitting With O-Ring

Non O-Ring Style Fittings

ALL48215 -6AN Male To 5/8"-18 Fitting **ALL48217** -6AN Male To 11/16"-18 Fitting

*These are the two most common fittings when O-rings are needed.

Sprint Power Steering Lines



Assembled lines for power steering have -6AN ends and are compatible with high pressure pumps found in today's sprint cars where standard hose and fittings cannot be used. Lines are lightweight yet strong, weighing less than a standard high pressure hose assembly. Plumbing is perfect for connection of KSE steering gear to pump. 13-1/2" long.

ALL48260..... Line With Steel Ends And Protective Wrap **ALL48261**..... Line With Aluminum Ends

Sprint Power Steering Supply Line

ALL48262

Gen2 supply line has a 90° -10AN and a straight -10AN aluminum fitting for a precise fit

to the KSE Gen2 steering gear. New style hose is very flexible yet will not collapse under suction. Total overall length including fittings 9".

Oil Filter Adapters

Oil filter adapters are OE style replacement mounts for securing oil filter to engine block or oil pan when rebuilding or replacing an engine

ALL92000 1968-96 SB Chevy Including LT1 and 1968-90
Gen IV BB Chevy Engines, Aluminum adapter
with bypass valve bolts to block and has 13/16"16 threads to accept oil filter.

ALL92001 Bolt kit for ALL92000

ALL92004..... Gen V and VI 1991-Up BB Chevy Engines, Adapter threads into block with 1"-12

threads and has 13/16"-16 threads to accept oil filter.

ALL92005 1997-2017 LS Series Engines Hex body adapter threads into oil pan.

ALL92006 1997-2017 LS Series Engines, Round body with internal hex adapter threads into oil pan.

ALL92003 Fits Most SB Ford 302-351W Engines, Adapter threads into block with 1-1/16"-12 threads and has 3/4"-16 threads to accept oil filter.



ALL92004

Chevy Billet Oil Filter Adapter

Billet aluminum adapter replaces the stock cast aluminum adapter and eliminates the bypass found in OE adapters. Adapter fits most 1968-96 SB Chevy and 1968-90 Gen IV BB Chevy engines, has 13/16-16 threads for spin-on style oil filters and includes mounting hardware.

Aluminum Oil Inlet Fittings

Aluminum fittings adapt NPT to AN threads that are commonly used when connecting oil lines, and other applications. Length stated is overall length. ALL90045 features two additional 1/8"NPT ports commonly used when plumbing valve spring oilers.

ALL90048..... 3/8"NPT to -10AN, 3" Long ALL90043..... 1/2"NPT to -10AN, 3" Long ALL90044..... 1/2"NPT to -12AN, 3" Long ALL90045.... 1/2"NPT to -12AN, 3-1/2" Long (With 1/8"NPT Ports)

ALL90044 ALL90045

Inline Oil Temperature Tees

Install in the oil return line (pump-to-tank) to adapt a probe for an oil temperature gauge. All inline tees have 1/2"NPT threads for probe fittings and 1/4" holes for mounting.

ALL90040.....-10AN ALL90041.....-12AN ALL90042.....-16AN

Reducer Fittings

Reducer fittings are an economical way to reduce the male AN thread size on items such as oil coolers and inline temperature tees.

ALL90075 -10AN To -8AN **ALL90076** -12AN To -10AN

Temperature Gauge Probe Adapters

Aluminum adapters are a nice upgrade from brass adapters and feature a longer length for use in shallow applications when the mechanical temperature gauge probe may contact the inside of a cylinder head or intake manifold. Extra length of fitting will still allow end of probe to protrude into the coolant for accurate readings.

ALL50203 3/8"NPT **ALL50204** 1/2"NPT

Drain Plug Kits

Drain plug kits include a machined weld-on bung that has a step added to fit inside a drilled hole for easy installation. Kits are perfect when adding drain plugs to oil pans, rear end housings, dry sump tanks, etc.



Size	Aluminum Bung	Steel Bung
3/8"NPT	ALL50732	ALL50733
1/2"NPT	ALL50734	ALL50735



Weld Bungs

Weld-on bungs are available in 6061 aluminum or mild steel and allow additional fittings to be added to radiators, oil pans, or for building custom tanks or other components.

Female NPT

Size	0.D.	Aluminum	Steel
1/8"-27NPT	3/4"	ALL50740	ALL50750
1/4"-18NPT	7/8"	ALL50741	ALL50751
3/8"-18NPT	1"	ALL50742	ALL50752
1/2"-14NPT	1-1/4"	ALL50743	ALL50753
3/4"-14NPT	1-3/8"	ALL50744	ALL50754
1"-11-1/2NPT	1-5/8"	ALL50745	_



Male AN

Size	Thread	Flange O.D.	Aluminum	Steel
4AN	7/16"-20	3/4"	ALL50760	ALL50770
6AN	9/16"-18	7/8"	ALL50761	ALL50771
8AN	3/4"-16	1"	ALL50762	ALL50772
10AN	7/8"-14	1-1/8"	ALL50763	ALL50773
12AN	1-1/16"-12	1-3/8"	ALL50764	ALL50774
16AN	1-5/16"-12	1-5/8"	ALL50765	ALL50775
20AN	1-5/8"-12	1-3/4"	ALL50766	ALL50776



Female AN ORB

Size	Thread	0.D.	Aluminum
4AN	7/16"-20	3/4"	ALL50780
6AN	9/16"-18	7/8"	ALL50781
8AN	3/4"-16	1"	ALL50782
10AN	7/8"-14	1-1/8"	ALL50783
12AN	1-1/16"-12	1-3/8"	ALL50784
16AN	1-5/16"-12	1-5/8"	ALL50785



Overflow Nozzles

Aluminum nozzle acts as a signal to the driver indicating a possible overheating condition as the cooling ALL30178 ALL30179 system pushes out water. Nozzle with threaded body mounts in a body panel outside the driver's compartment and is available with a 1/4" barb or a -4AN male fitting.

ALL30178 Nozzle With 1/4" Barb Fitting ALL30179 Nozzle With -4AN Male Fitting

Radiator Overflow Fitting ALL99312

Commonly used fitting threads into the filler neck of most radiators, allowing connection to an overflow tank. Aluminum fitting has 1/8"NPT threads and accepts a 5/16" hose.

Petcock ALL99030

Replacement petcock for Allstar breather and overflow tanks is also perfect for draining coolant from engines. 1/4"NPT threads.

Radiator Hoses

Two-ply coolant hose is flexible and adapts to a variety of applications.



Abrasion resistant cover will not crack or harden.

1-1/2" Dia. Upper Hose	1-3/4" Dia. Lower Hose
ALL30200 12"	ALL30220 11"
ALL30202 14"	ALL30222 13-1/2"
ALL30204 15-1/2"	ALL30224 16-1/2"
ALL30206 17"	ALL30226 19"
ALL30208 20"	ALL30228 23-1/2"
ALL30210 22"	Hose Clamps (2-Packs):
ALL30212 25"	ALL18334 Clamps, Upper Hose
ALL30214 30"	ALL18336 Clamps, Lower Hose

Hose Clamps

Heavy duty all stainless steel clamps are easily tightened with a deep slot hex head screw. Superior to standard hardware store clamps. For best connection, select the clamp which fits within the range of hose O.D.

Part No.	Min Hose O.D.	Max Hose O.D.		
2-Pack				
ALL18330	1/4"	5/8"		
ALL18332	1/2"	1-1/8"		
ALL18334	1"	2"		
ALL18336	1-5/16"	2-1/4"		
ALL18338	1-9/16"	2-1/2"		
ALL18340	1-5/8"	3-1/2"		
ALL18342	2-5/8"	4-1/2"		
10-Pack				
ALL18330-10	1/4"	5/8"		
ALL18332-10	1/2"	1-1/8"		
ALL18334-10	1"	2"		
ALL18336-10	1-5/16"	2-1/4"		
ALL18338-10	1-9/16"	2-1/2"		

Power Grip Clamps

Gates Power Grip Clamps seal when heated with a standard heat gun, forming a tight band around standard rubber and silicone coolant hoses to provide a secure con-





nection, even under harsh race condi-

tions. Installed clamps provide a smooth, flush fit around hoses and eliminate exposed sharp edges associated with standard hose clamps. Select the band clamp which fits within range of hose O.D. for best connection. Sold each.

Part No.	Min Hose O.D.	Max Hose O.D.
ALL30250	1/2"	11/16"
ALL30251	11/16"	13/16"
ALL30252	13/16"	15/16"
ALL30253	15/16"	1-1/16"
ALL30254	1-1/16"	1-3/16"
ALL30255	1-3/16"	1-1/2"
ALL30256	1-1/2"	1-3/4"
ALL30257	1-3/4"	2"
ALL30258	2"	2-1/4"

Note: Clamps are not designed for use with flammable liquids or fuel line connections.



Performance Mechanical Fuel Pumps

Lightweight die-cast three valve pump isgreat for use with Sportsman type engines up to 700HP and 8,000 RPM. Pump features AN style inlet and outlet fittings for easy plumbing. Lower section is clockable every 30° to fit most applications. Pump is rated at 45 GPH @ 7–8.5 PSI and does not require an external fuel pressure regulator.

ALL40266 8AN Inlet / 8AN Outlet **ALL40267** 10AN Inlet / 8AN Outlet

NEW

Replacement Fittings

ALL50915 8AN Fitting **ALL50916** 10AN Fitting

Sportsman 2-Valve Fuel Pumps

Pumps with aluminum housings have 1/4"NPT inlet/outlet fittings, heavy duty diaphragms, anti-float springs, and "clockable" lower base for rotation of inlet and outlet. Pumps deliver 6-1/2 to 8 PSI with 80 GPH free flow.

ALL40260 SB Chevy **ALL40261** BB Chevy **ALL40262** SB Ford



O.E. style plate replaces lost or missing mounting plate required to mount mechanical style fuel pump to most small block Chevrolet engines. Clear zinc plated finish may also be painted to match original appearance. Mounting hardware included.

SB Chevy Fuel Pump Block Off Plate ALL40255

Plate covers mechanical fuel pump engine opening on most small block Chevrolet when omitting a mechanical style fuel pump. Plate is often used when converting to electric or belt driven fuel pumps. Clear zinc plated finish may also be painted.

Billet Fuel Pump Block-Off Plates

CNC-machined billet aluminum plates cover the mechanical pump opening in the engine block and include a gasket and stainless steel fasteners.



Description	Blue	Clear	Red	Black
SB Chevy	ALL40300	ALL40301	ALL40302	ALL40306
BB Chevy, SB/BB Ford [†] , SB/BB Chrysler	ALL40303	ALL40304	ALL40305	ALL40307

tWill not fit Ford 351C, 351M-400.

Compact Electric Fuel Pump

ALL40320

High flow, low pressure electric fuel pump equipped with a 5/16" inlet/outlet. The pump flows 18 gph at 4.0 PSI, 5.5 PSI maximum. Includes a rubber padded mounting bracket and two heavy duty hose clamps. Rated 12V/5 amps. Overall length is 5-1/2" x 1-1/2" wide.

Bracket for Compact Electric Fuel Pump ALL40322

Bracket mounts our popular electric fuel pump ALL40320 with 1-1/2" o.d. to 1-1/8" chassis tubing, commonly used on minisprint cars.



Fuel Pressure Regulator

ALL40290

ALI40260

ALL40261

Place regulator between fuel pump and carburetor to regulate fuel pressure when using mechanical and electric performance fuel pumps. Two-piece aluminum body has a single 3/8"NPT inlet port on the bottom and two 3/8"NPT side outlet ports. "Dead Head" style regulator does not require a return line back to fuel tank or cell. 1/8"NPT port for mounting a fuel pressure gauge or sender line. Regulator also includes steel mounting bracket. Regulator is gasoline, ethanol, and E85 compatible. Use with 4.5 to 14 PSI systems. Not methanol compatible.

Replacement Part

ALL99430 Rebuild Kit

Shockproof Pressure Gauges

1-1/2" diameter gauges are constructed using reliable brass internal parts and have all80200 a 1/8"NPT male fitting on the backside of the gauge. Dry gauges feature a chrome plated steel housing, while glycerin-filled gauges feature a stainless steel housing helping to dampen the effect of pulsation and pressure spikes of the gauge needle.

	Glycerine		Engine
Description	Filled	Dry Type	Turned
0-15 PSI	ALL80200	ALL80210	ALL80220
0-30 PSI	ALL80202	-	ALL80222
0-60 PSI	ALL80204	ALL80214	ALL80224
0-100 PSI	ALL80206	ALL80216	ALL80226
0-1,500 PSI	ALL80208 (NOS)	ALL80218	_

Hi-Flow Chrome Fuel Filter ALL40250

Canister-type filter has 3/8"NPT inlet and outlet, a replaceable 10 micron element, and 90 GPH flow.



Replacement Part

ALL40251 Replacement Element And Seals



Inline Aluminum Fuel Filters

Black anodized, high flow inline filters are available with no element or with a



stainless or paper element. Choose correct bracket and mount to chassis tubing along fuel line. Filter elements are 8" long and fit in a 9" housing. Overall length is 12" and outside diameter is 2". Filter flows enough fuel for any race car. Stainless elements are compatible with E-85 and methanol fuels.

Black Anodized Fuel Filters

	With Paper	With Stainless	Without
Fitting Size	Element	Element	Element
-6AN Ends	ALL40238	ALL40239*	ALL40243
-8AN Ends	ALL40216	ALL40218*	ALL40244
-10AN Ends	ALL40217	ALL40219*	ALL40245
-12AN Ends	ALL40240	ALL40242*	ALL40246

Replacement Parts

ALL40220 Paper Element (10 Micron) **ALL40222*** ... Stainless Element (63 Micron)

ALL40223 -6AN End Cap **ALL40224**..... -8AN End Cap **ALL40226.....** -10AN End Cap ALL40225 -12AN End Cap **ALL40236**..... Spring

ALL40237 O-Ring 2-Pack





Filter Fact:

Filter element must be installed with the closed end and the spring toward the INLET end of housing. The open end faces the OUTLET.

Fuel Filter Brackets

Brackets mount Allstar inline aluminum fuel filters to round or square tubing and flat surfaces. Flush mount bracket fastens to flat panels like a ALL40235 frame rail or firewall. A locking set screw holds filter in place. Brackets for round and square tubing clamp with caps secured by Allen head screws. Sold each.

	,	
Part No.	Tubing Size	Tubing Shape
ALL40229	1-1/4"	Round
ALL40227	1-3/8"	Round
ALL40228	1-1/2"	Round
ALL40230	1-3/4"	Round
ALL40232	2" x 2"	Square
ALL40235	Flush Mount	_



2-Piece Fuel Filter Brackets

Brackets are a two-piece design that clamps our 2" O.D. in-line style fuel filter directly to the chassis tubing. Bracket secures filter to the tubing but does not fit completely around chassis tubing for applications when decking or sheet metal is mounted directly against the tubing. Sold each.

ALL40190.	1-1/8"
ALL40191.	1-1/4"
ALL40192.	1-1/2"
ALL40193.	1-3/4"

ALL40208

Valve is placed in-line near the fuel cell to prevent fuel from freeflowing in the event of an accident that damages the fuel pump

or fuel line. The suction action of the fuel pump overrides the internal spring which opens the valve allowing fuel to flow without restriction. Valve accepts -10 ORB style fittings.

NEW

Fuel Filter Shut-Off Valve

ALL40210

Valve installs on the inlet end of our inline aluminum fuel filters allowing fuel to be shut off for maintenance or safety reasons.

Ball style shut off features a lever with a 1/4"-20 threaded hole for mounting a ball stud or securing a rod end for use with remote shut off.

Fuel Line

Premium fuel line is reinforced to help prevent kinking and is rated up to 50PSI for use with carbureted applications. Fuel line is compatible with gaso-

line, E-85, diesel and biodiesel and has many other uses including connecting PCV valves, coolant overflow tanks, vent lines for transmissions and differentials. Line Size indicated is I.D. of hose.

Note: Line is not for use with fuel injection and is not submersible.

ALL40350..... 1/4", 3' Long ALL40354 5/16", 25' Long ALL40351 1/4", 25' Long ALL40356..... 3/8", 3' Long **ALL40357**..... 3/8", 25' Long ALL40353 5/16", 3' Long

Vacuum Line

Premium vacuum line resists kinking and is pliable for easy routing. Often used when connecting sensors, vacuum advance units, windshield washers or replacing existing cracked, leaking vacuum lines. Size indicated is I.D. of hose.

ALL40340 5/32", 5' Long ALL40341 5/32", 50' Long ALL40342 7/32", 5' Long ALL40343 7/32", 50' Long

Coiled Tubing

Coiled tubing works great for building 1 piece custom fuel lines without unions. Stainless steel tubing is 304 grade and double annealed for easy flaring and bending. Tubing does not include flare nuts (sold separately).

ALL48327 5/16" Standard Zinc, 25' ALL48320 5/16" Stainless, 20' ALL48328 3/8" Standard Zinc, 25' ALL48322 3/8" Stainless, 20'





Inverted Flare Nuts

Flare nuts are used for building custom length lines.

Part No.	Size	Material	Qty.		
Flare Nuts	for 5/16"	Fuel Line			
ALL50140	1/2"-20	Zinc Plated	10-Pack		
ALL50141	1/2"-20	Stainless	4-Pack		
Flare Nuts	Flare Nuts for 3/8" Fuel Line				
ALL50142	5/8"-18	Zinc Plated	10-Pack		
ALL50143	5/8"-18	Stainless	4Pack		





Stainless Steel

Aluminum Fuel Line

Aluminum fuel line is seamless and available in three diameters. 25' coil.

ALL40180 3/8" O.D. ALL40185 1/2" O.D. ALL40186 5/8" O.D.



Heat Sleeve

High temperature silicone coated fiberglass sleeving is non-flammable and resists temperatures up to 500°F. An excellent choice for protection of



fuel lines, wiring, cables and various similar uses. Sleeving is resistant to gasoline and many other chemicals. Sold in 3' lengths. Size referenced is sleeve I.D. or O.D. of hose to be covered.

Color	1/4"	1/2"	3/4"	7/8"	1"
Orange	ALL34280	ALL34282	ALL34284	ALL34285	ALL34286
	ALL34290				

Adjustable Fuel Logs

Adjustable fuel logs feature over 4" of adjustment to work with a variety of dual inlet carburetors. Black



ALL26150

anodized aluminum log has a -8AN fuel inlet and a 3/8"NPT plug in rear port that can be removed to install a return line or fuel pressure regulator.

ALL26150 Fuel Log With 7/8"-20 Fitting (Standard Holley) ALL26151 Fuel Log With 3/4"-16 ORB Fitting (Holley Ultra HP)

Fuel Logs

Fuel logs efficiently provide fuel to most 4150 series Holley style carburetors with 7/8"-20 inlet threads and standard



metering blocks. Choose log with a -8AN male inlet fitting or -8 barbed inlet fitting for use with push lock hose. Logs have 1/2"NPT and 1/8"NPT plugs that can be removed to install a return line or fuel pressure gauge.

ALL26152 Fuel Log With -8 Barbed Inlet Fitting ALL26153 Fuel Log With -8AN Male Inlet Fitting

Aluminum Carb Fittings

Convert Holley carburetors with 7/8"-20 threads, Holley Ultra HP with 3/4"-16 ORB threads or BG/Demon style with 9/16"-24 threads to an AN style connection. Anodized aluminum fittings simplify plumbing fuel systems and building custom fuel lines. Fittings sold each.



Fittings With:	Blue	Black
Female -6AN End Holley (7/8"-20)	ALL50890	ALL50892
Male -6AN End Holley (7/8"-20) Short	ALL50894	ALL50896
Female -8AN End Holley (7/8"-20)	ALL50900	ALL50902
Female -8AN End Holley HP (3/4"-16 ORB)	-	ALL50907
Female -8AN End BG/Demon (9/16"-24)	ALL50901	_
Male -8AN End Holley (7/8"-20) Short	ALL50904	ALL50906
Male -8AN End Holley (7/8"-20)	ALL50905	_

Replacement Part

ALL50910 Sealing Washer for 7/8" Fittings, 10-Pack

Fuel Line Kits Dual feed fuel line kits

include the correct fittings and hoses to properly plumb single carburetor applications when con-



ALI 26156

Application	СТоС	Carb Thread	Red/ Blue	Black
-6 Holley (4150 Series)	9-5/16"	7/8"-20	ALL26154	ALL26164
-8 Holley (4150 Series)	9-5/16"	7/8"-20	ALL26156	ALL26166
-8 Holley (4150 Series)*	9-5/8"	7/8"-20	ALL26159	ALL26169
-8 Holley Ultra HP (4150 Series)	9-5/8"	3/4"-16	_	ALL26165
-8 Holley Dominator (4500 Series)	11-5/8"	7/8"-20	ALL26158	ALL26168
-8 BG Demon	9-5/8"	9/16"-24	ALL26157	ALL26167

^{*}Designed for carburetors with custom metering block including Willy's and KB.

GM T.P.I. Fuel Injection Fittings

Special tube O-ring fittings convert GM Tuned Port Injection fuel systems to -6AN fittings.

ALL50950 TPI Return Fitting, 14mm-1.50 **ALL50951** TPI Inlet Fitting, 16mm-1.50





Down Nozzle Filter with Breather Ring ALL40325

Filters allow excess fuel to evacuate the injection lines once engine is shut down to help prevent fuel from entering the cylinders. Low profile filter design reduces the chance of damage. Package of 8.

Nozzle Plugs ALL40327

Nozzle plugs take the place of the fuel nozzles when only running one set of injectors. Plugs feature 1/2"-20 threads and include a sealing o-ring. Package of 8.

Nitrous Bottle Warmer

ALL76428

Nitrous bottle warmers are the right way to safely obtain correct pressure in colder weather. Wrap around design evenly distributes heat on the bottle, eliminating hot spots. 12-16 volt warmers are designed to work with ALL76197 and ALL76198 pressure control kits. Bottle warmer measures 19" x 6" and includes adjustable straps to fit most 5, 10 and 15 lb. bottles.

Nitrous Pressure Control Kits

Kit simplifies installation of a bottle warmer and helps maintain a consistent pressure

when using a bottle warmer. 12V kit includes an adjustable pressure switch which controls the bottle warmer.

ALL76197 Kit With -4AN Line Adapter ALL76198 Kit With -6AN Line Adapter

Burst Panel Components



Burst panel is designed to blow open or release excessive manifold pressure in the event of an internal engine explosion, helping to prevent costly supercharger and body damage. Panel meets SFI 23.1 specifications and is commonly used on supercharged, alcohol injected engines, mounting directly to the intake manifold or supercharger (screw type only). Outer frame deflectors will direct force away from car.

ALL26310 Burst Panel. Large (3-1/8" x 6-1/8")

ALL26311 Outer Burst Panel Frame

ALL26314 Outer Burst Panel Frame With Deflector

ALL26313 Inner Burst Panel Frame (Used when manifold has an open plenum without burst panel sup-

ALL26315 Fastener Kit 10-24 x 3/4", 24-Pack (For use with panel and outer frame or deflector.)

ALL26316 Fastener Kit 10-24 x 1", 24-Pack (For use with panel, inner frame and outer frame or deflector.)

Carb Hats

Carburetor hats are ideal to cover open carbs and prevent debris from falling into the engine while working in garage or pit area while the air cleaner is removed. 2-1/2" tall carb hats are designed to fit most carbs or throttle bodies with a 5-1/8" diameter neck.



ALL26040

ALL26042





ALL26043 ALL26044

ALL26040 Plastic

ALL26042 Plastic With Screen

ALL26043 Aluminum

ALL26044 Aluminum, With Sealing O-Ring

Note: Hats will not clear choke linkage or shaft on Holley style carbs but will clear choke horn with choke linkage and shaft removed.

Dominator Carb Hat ALL26041

Plastic carb hat is 2-3/8" tall and fits over the 7-1/4" air cleaner opening of Holley Dominator carburetors to prevent water or debris from entering the engine. Solid

cover may be drilled when an air cleaner stud is used.

Drag Hi-Flow Carburetor Spacers

Specially designed for drag race applications to isolate carburetor from manifold, spacers prevent horsepower-robbing heat transfer and increase the distance from the bottom of the carburetor to the manifold plenum for better air flow. Spacers are CNC-machined in the U.S. from a polymer compound able to withstand temperatures up to 400°F. Available in open or four hole versions for 4150 and 4500 series Holley and Holley style carburetors in 1/2", 1" and 2" heights. Tapered four-hole spacers have specially contoured holes to increase air velocity under the carburetor. Not intended or recommended for street or circle track use.

Part No.	Description	Part No.	Description
4150 Serie	S	4500 Series	S
ALL25980	Open, 1/2"	ALL25990	Open, 1/2"
ALL25981	Open, 1"	ALL25991	Open, 1"
ALL25982	Open, 2"	ALL25992	Open, 2"
ALL25983	4-Hole, 1/2"	ALL25993	4-Hole, 1/2"
ALL25984	4-Hole, 1"	ALL25994	4-Hole, 1"
ALL25985	4-Hole, 2"	ALL25995	4-Hole, 2"
ALL25986	Tapered 4-Hole, 1"	ALL25996	Tapered 4-Hole, 1"
ALL25987	Tapered 4-Hole, 2"	ALL25997	Tapered 4-Hole, 2"

Primer Bottle ALL40090

Durable plastic squeeze bottle is ideal for priming alcohol engines. Cap has an angled filler tube, with tapered tip that fits easily into the vent tube of carburetor fuel bowl. 16.9 ounce capacity.



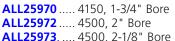


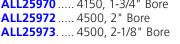
ALL25970

Bottom View

Carb Shear Plates

Carb plates with built-in shear design help maximize performance on race engines with a large amount of cam overlap by creating a dam under the throttle plates, helping to build low pressure while improving vacuum signal to the carb. 1/2" tall plates are machined from 6061-T6 aluminum and clear anodized to protect against corrosion.





Carburetor Gaskets

ALL87200 4150 Open ALL87202 4150 4-Hole ALL87204 4412 2-Hole, 2bbl. ALL87206 4500 Open, Dominator

Carburetor **Hold Down Nuts**

Easily remove these hold down nuts with a 1/4" extension. The spring ball on your extension holds the nut in place, no wrench or socket needed! Package of 4.

ALL26324 5/16"-18 Coarse Thread Nuts ALL26326 5/16"-24 Fine Thread Nuts

Angled Carb Spacer ALL25975

For Dirt Late Models and Modifieds, spacer is angled downward, toward left front, to correct hesitation caused by poor fuel distribution as car "rocks up". Four-hole design enhances carb signal to improve throttle response and increase torque.

Angled Restrictor Plate ALL25977

Four-hole aluminum spacer angles the carburetor left and to the rear so the carb is closer to level when in race attitude. Spacer accepts 1/2" or 1" tapered inserts which can be changed guickly by removing the carb. Inserts restrict air/fuel entry and reduce



Restrictor Plates

The "Governor" is a four-hole aluminum spacer that accepts tapered inserts which can be changed quickly by removing the carb. Inserts restrict air/fuel entry and reduce power ALL26180 slightly to prevent wheel spin and range in size from 0.950" to 1.400" for custom tailoring and guicker lap times. Spacer works with most Holley 4bbl. 4150/4160 series carburetors. Inserts sold separately.

ALL26180 1/2" Restrictor Plate ALL26060 1" Restrictor Plate

Restrictor Plate Inserts

Tapered inserts are machined to be within .002" for precise tuning. Inserts feature a step to simply drop into spacers and have sizes engraved on each insert for easy identification. Sold in a set of 4.

For 1/2" Restrictor Plate		
Part No.	Size	
ALL26181	0.950"	
ALL26182	1.000"	
ALL26179	1.050"	
ALL26183	1.100"	
ALL26184	1.150"	
ALL26185	1.200"	
ALL26186	1.250"	
ALL26187	1.300"	
ALL26188	1.350"	
ALL26189	1.400"	

For 1" Restrictor Plate		
Part No.	Size	
ALL26061	0.950"	
ALL26062	1.000"	
ALL26059	1.050"	
ALL26063	1.100"	
ALL26064	1.150"	
ALL26065	1.200"	
ALL26066	1.250"	
ALL26067	1.300"	
ALL26068	1.350"	
ALL26069	1.400"	

Full Throttle Non-Restricting Inserts ALL26190

Inserts are used in place of restricting inserts allowing full throttle operation without restriction, commonly used when qualifying or when track conditions allow for more power. Insert design provides a smooth transition over simply removing the restrictor inserts. Sold in a set of 4.

Circle Track Throttle Return Spring Brackets

Black anodized aluminum bracket fastens to the carburetor mounting studs and features a larger opening specifically designed for use with mechanical linkage found on many circle track cars. The larger opening allows throttle



ALL54185

linkage to be routed from underneath to help prevent clearance or interference issues. Dual return springs are connected to a universal return spring bracket to work with most carburetors. Brackets include a built-in adjustable throttle stop to help prevent damage to carburetor.

ALL54185 Bracket For 4150 Series 4bbl. ALL54186 Bracket For 4412 Series 2bbl.

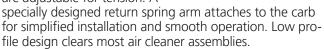


ALL54201

ALL54211

Throttle Return Spring Brackets

Billet aluminum bracket can be used with cable or mechanical linkage. Bracket fastens to carb mounting studs and includes dual stainless steel return springs which are adjustable for tension. A



Carb Size	Clear	Black
4150/Edelbrock	ALL54200	ALL54202
4500	ALL54201	ALL54203

Note: Longer carburetor studs will be required to accommodate bracket.

Adjustable Throttle Brackets With Return Springs

Billet aluminum throttle bracket securely mounts and holds throttle cable in place. Bracket fastens to carb

mounting studs and includes dual stainless steel return springs which are adjustable for tension. Specially designed return spring arm attaches to the carb for simple installation and smooth operation. Low profile design clears most air cleaner assemblies. Optional transmission kickdown brackets mount to the underside of throttle cable brackets.

Carb Size	Cable Style	Clear	Black
4150/Edelbrock	GM	ALL54210	ALL54211
4150/Edelbrock	Lokar	ALL54214	ALL54215
4150/Edelbrock	Morse	ALL54218	ALL54219
4150/Edelbrock	Ford	ALL54222	ALL54223
4150/Edelbrock	Mopar	ALL54224	ALL54225
4500	GM	ALL54226	ALL54227
4500	Lokar	ALL54230	ALL54231
4500	Morse	ALL54234	ALL54235
4500	Ford	ALL54238	ALL54239
4500	Mopar	ALL54240	ALL54241

Note: Longer carburetor studs will be required to accommodate bracket.

Throttle Bracket Replacement Ends

Throttle bracket replacement ends allow throttle cable assemblies to be changed without having to purchase a whole new kit.

Cable Style	Clear	Black
GM	ALL54260	ALL54261
Lokar	ALL54264	ALL54265
Morse	ALL54268	ALL54269
Ford	A1154272	A1154273

Fuel Regulator Brackets

Billet aluminum brackets will mount four different style regulators. Hardware included. Silver in color. ALL54280

Regulator	4150 Carb	4500 Carb
Aeromotive	ALL54280	ALL54282
Holley	ALL54284	ALL54286
Magnafuel	ALL54288	ALL54290
Mallory	ALL54292	_

Scoop Tray Mounts

Scoop tray mounts offer an all in one solution to mount a scoop tray, throttle, and nitrous solenoids. Mounts provide a clean look, eliminating the need to use multiple brackets, mounts and gaskets. CNC machined from 6061 aluminum, black anodized.

Standard Mounts

ALL54302 4150 (1.755" Bore ALL54304 4500 (2.375" Bore)

Mounts w/ Nitrous Solenoid Mounts

ALL54306..... 4150 (1.755" Bore) **ALL54308**..... 4500 (2.375" Bore)

Return Spring Brackets

Kits are replacement hardware found on Allstar throttle brackets or may be used when building custom return spring brackets.

ALL54194 ... 4150. Clear **ALL54195** ... 4150, Black ALL54196 ... 4500, Clear ALL54198 ... Lokar, Clear ALL54199 ... Lokar, Black ALL54193 ... Return Springs Only, (2)

ALL54197 ... 4500, Black

Carb Stud Spacers ALL99388

Spacers provide added clearance between throttle brackets and carburetors when needed. Spacers are 5/16" tall with 11/16" I.D. Package of 2.

Transmission Kickdown Brackets

Kickdown bracket attaches to the bottom of Allstar's adjustable throttle brackets. Fully adjustable to achieve correct cable setting.

ALL54276 GM Style, Clear ALL54277 GM Style, Black ALL54278 Lokar Style, Clear ALL54279 Lokar Style, Black

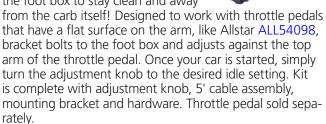
Adjustable Idle Kit

ALL54154

ALL54260

Need cold start help to keep your race car running and get it warmed up? This kit allows you to adjust your idle speed from inside the cockpit! All items mount inside

the foot box to stay clean and away





ALL54276

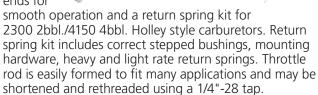
Δ115/130/



Aluminum Carb Linkage With Return Spring Kit

ALL54158

Linkage kit includes a 24" linkage with 1/4" rod ends for



Replacement Parts

ALL54159 Carb Linkage Only ALL54168 Return Spring Kit

Steel Carb Linkage



26" steel linkage kits with quick disconnects speed up carb changes and servicing. ALL54170 includes one 1/4"-28 LH rod end and one quick disconnect. ALL54171 includes two quick disconnects.

ALL54170 One Quick Disconnect And One 1/4"-28LH

Rod End

ALL54171 Two Quick Disconnects

Replacement Parts

ALL54172 Throttle Ball

ALL54173 RH Quick Disconnect **ALL54174** LH Quick Disconnect ALL54175 24" Throttle Rod

Throttle/Shift Cables

Cables have many uses including use as a throttle cable or as a shifter cable many applications. Cables have 7/16" mounting threads, #10-32 RH cable ends and 3" of travel. Cables are listed as overall length.

ALL54142 43" ALL54145 60"

Morse Cable Half Clamp

ALL18325

Aluminum clamp fits over groove in nonthreaded Morse style cables with a 3/8" housing to secure cable in place. Clamps feature a #10 (3/16") mounting hole. Sold each.



Quick Release Cable Ends

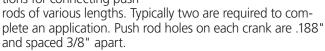
Ouick release ends are used when a connection needs to be removed and installed often. Steel constructed housing has a spring loaded release to keep housing secure to pivot ball.

ALL54147 #10-32 With #10-32 And 1/4"-28 Studs ALL54149 1/4"-28 With 1/4"-28 Stud

Throttle Bell Cranks

Designed for Sprint car applications, each bell crank is fitted with a pressed .250" I.D. bearing for smooth throttle operation and has optional loca-

ALL54150 tions for connecting push



ALL54150 Arms Set 75° Apart, 35 Grams **ALL54152** Arms Set 70° Apart, 40 Grams

Carb Mount Return Spring Kit

ALL54168

Kit includes chrome plated steel bracket, springs, bushings and hardware to fit a variety of applications.



Universal **Return Spring Bracket ALL54167**

Chrome plated steel bracket provides mounting location for return spring.

Universal Return Spring Kit

ALL54166

Kit includes two springs and mounting bracket.

Return Springs ALL54163

Universal springs for carburetor are 11-1/2" long unextended. Package of 2.

Throttle Bushing Kit ALL54164

Aluminum bushings are stepped for clearance and adapt from 1/2" to 1/4" holes.









ALL54180

Wide Open Throttle Microswitch Brackets

Black anodized microswitch brackets are made from lightweight billet aluminum and fit Holley 4150 and 4500 carburetors for precise activation of the microswitch. Brackets work with the

standard secondary arm as well as a throttle adjustmentscrew secondary arm. Each kit includes a bracket, microswitch and stainless steel hardware securing microswitch to the bracket. ALL54180 includes stainless hardware for mounting bracket to carburetor. ALL54181 mounts to an existing carb stud.

ALL54180 WOT Microswitch And Bracket For 4150 Carbs*
ALL54181 WOT Microswitch And Bracket For 4500 Carbs
ALL54182 Microswitch Only

*Some model carbs may require mounting bosses be 8-32 tapped for installation.

Throttle Pedal Assembly

ALL54106

Rugged aluminum pedal may be mounted to the floor pan or lower frame rail for smooth, safe throttle control. Includes return spring bracket and fasteners.

Sprint Car Throttle Pedals



Pedals fit most sprint chassis with pivot spud welded on frame rail.

ALL54094..... Titanium

ALL54095 4130 Chrome Moly

Heel Riser

Aluminum heel risers are drilled for easy mounting and include a non-skid pad. 4-1/2" wide.

ALL54090..... 1" Tall Riser **ALL54091**..... 1-1/2" Tall Riser

Heel Riser Rest ALL54092

Aluminum bracket is 1" tall and rivets to heel risers to help keep foot in place on the riser.



Floor Mounted Throttle Pedal Kit

ALL54102

Floor mount pedal offers a smooth, natural feel to maximize throttle control and comfort.
Complete kit



includes a pedal with a built-in return spring and throttle stop, universal firewall bell crank assembly and two 24" throttle rods with rod ends and mounting hardware.

Firewall bell crank assembly requires welding to match the firewall angle and throttle rods will need to be cut and threaded to your specific lengths.

Individual Components

ALL54104 Pedal Only

ALL54105 Throttle Cross Shaft **ALL54159** Linkage Rod Only

Gas Pedals



Gas pedals can be pulled back if throttle binds or return spring fails. Side mount pedals are available as standard or roller design for smoother throttle control. Firewall mount pedal is used on race cars with flat or stock type firewalls.

ALL54100 Standard ALL54101 Roller ALL54107 Firewall Mount

Adjustable Gas Pedals

Fully adjustable aluminum gas pedals are available for straight or angled foot box panels. Bronze bushings and nylon rollers provide smooth operation. Linkage arm has 1/4" holes spaced every 1/2" for adjustment of throttle linkage.

ALL54098..... Straight ALL54099..... Angled





Fuel Cell Cap And Bolt-In Bung Kits

Billet aluminum neck looks good and provides a positive seal. The filler neck is raised to help prevent dirt and debris from falling into cell, causing fuel system contamination, while the large 3" opening helps when refueling. Kit includes mounting hardware.

ALL40133 12-Bolt JAZ/RCI w/Red Cap ALL40134 6-Bolt JAZ w/Red Cap ALL40136 12-Bolt JAZ/RCI w/Black Cap ALL40137 6-Bolt JAZ w/Black Cap



ALL40136

Redhead Dry Break Valves

Safe and effective method for refueling prevents fluid loss. Spring loaded female receptacle mounts in a variety of locations and automatically closes when male dry break is removed. Female dry break accepts 2-1/2" fuel hose. Male dry break accepts 2-1/4"

ALL40213 Female ALL40215 Male

Replacement Parts

ALL99028..... Seal Kit For ALL40213 **ALL99029** Seal Kit For ALL40215

Fuel Cell Mounting Bracket ALL60063

Steel bracket is radiused to fit 1-1/2" tubing and has (8) 3/8" holes on 1/2" centers. Bracket is .085" thick and 1-1/2" wide x 4-3/4" tall.

Overflow Check Valves Valves are 9-3/4" long and

available in two styles. Use with ALL10102 overflow catch can.

ALL40200 1" Flapper Style **ALL40201** 1-1/4" Flapper Style **ALL40203** 1-1/4" Spring-Loaded

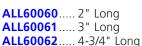


ALL40213

ALL40215

Fuel Cell Mounting Brackets

Steel brackets are .125" thick, 1-3/4" wide and available in three lengths. All have 3/8" holes.



Fuel Cell Hose

Clear vent and filler hose is ideal for circle track cars. Sold in pre-cut lengths of 5', 10' and 20'.



Description	5'	10'	20'
1" I.D. Vent Hose	ALL40160-5	ALL40160-10	ALL40160-20
1-1/4" I.D. Vent Hose	ALL40161-5	ALL40161-10	ALL40161-20
1-1/2" I.D. Vent Hose	ALL40162-5	ALL40162-10	ALL40162-20
2-1/4" I.D. Filler Hose	ALL40168-5	ALL40168-10	ALL40168-20
2-1/2" I.D. Filler Hose	ALL40170-5	ALL40170-10	ALL40170-20

Drum/Barrel Pump ALL40114

Hand siphon drum pump dispenses or transfers low viscosity fluids from a 55-gallon drum. Self priming bulb delivers up to 5 gallons per minute. Compatible with gasoline, methanol and nitro methane.

Funnels

Heavy duty plastic funnels are perfect for topping off fuel or other liquids. Available in several sizes.

ALL40100 6 Qt. Funnel With Brass Screen ALL40102 2 Qt. Funnel With Brass Screen ALL40104..... 1 Pint Funnel With Brass Screen





Ryan VanderVeen

Drum Pump Kit for Utility Jugs

Easily transfer low viscosity fluids from most popular utility jugs without lifting a heavy jug by converting jug into a hand pump unit. Kit includes a cap and hand pump to replace the original utility jug cap. Individual cap may be purchased separately when using an existing pump. Pump siphon tube will need to be cut to length depending on the size of jug used.

ALL40116 Kit For Use With Scribner Jug ALL40117 Kit For Use With VP Jug

ALL40118 Cap Only For Use With Scribner Jug

ALL40119 Cap Only For Use With VP Jug



Wheel Bearing Kits

Kits contain inner bearing, outer bearing and seal.

ALL72300 Wide 5 Kit, Wilwood, Winters

ALL72311*.... Wide 5 Low Drag Kit, Wil-

wood, Winters

ALL72301 Wide 5 Kit, Howe (Contender Hub Only)

ALL72302 5x5 Kit, 2" Pin **ALL72303** 5x5 Kit, 2-1/2" Pin

*Kit includes REM finished bearings and low drag lip style seal.

Timken Wide 5 Wheel Bearing Kit

This wheel bearing and seal kit is designed to fit most Wide 5 hubs. The complete kit will update one hub and includes inner and outer

wheel bearings, inner and outer races and a low drag hub seal.

Timken Wheel Bearing Grease







ALL78240 14 Oz. Cartridge Standard ALL78241 16 Oz. Tub Standard

ALL78242 14 Oz. Cartridge High Temp. Synthetic

Wheel Bearings And Races

Tapered roller wheel bearings and bearing races are direct replacements for many popular applications. REM finished bearings and races feature a special polished finish for reduced drag over standard bearing/race combinations.





Master Wheel Bearing And Seal Kits

Kits contain all components to install one brake rotor/hub assembly including hub seal, inner bearing, outer bearing, locknut kit and dust cap.

ALL72305[†] GM Intermediate Metric, 1979-81 ALL72306[‡] GM Intermediate Metric, 1982-88

ALL72308 Ford Granada, Mustang II

ALL72309 Hybrid

†Bearing For Race Or Cup With A 1.97" O.D. ‡Bearing For Race Or Cup With A 1.78" O.D.

1 Ton Wheel Bearing Kits

Kits contain all components to install one hub assembly including a hub seal, inner bearing, inner race, outer bearing and outer race. REM finished bearings and races feature a special polished finish for reduced drag over standard bearing/race combinations

ALL72313 Kit with Standard Bearings ALL72314 Kit with REM Finished Bearings

ALL72176 Spindle Lock Nut Kit **ALL10114**..... Spindle Nut Sockets



ALL72305



Bearing Spacers

Spacers fit between inner and outer bearings. Prevent overtightening and consistently set bearing pre-load while reducing bearing drag.
US Patent No. 6,312,162.



ALL72320 Wide 5

ALL72323 5x5 With 2" Pin **ALL72324** 5x5 With 2-1/2" Pin **ALL72322** Pinto Spindle Hybrid Hub **ALL72325** Metric GM (Monte Carlo)



Hub seals keep grease in the hub and on the wheel bearings. Available for 5x5 and Wide 5 hubs. Low drag seals reduce drag for improved performance.



Description	Standard Hub Seal	Low Drag Hub Seal
Wide 5 (Except Howe)	ALL72120	ALL72121
Wide 5 (Except Howe) O-Ring Style	-	ALL72122
Wide 5 Howe	ALL72124	ALL72125
5x5 2" Pin, Allstar, Howe	ALL72124	ALL72125
5x5 2-1/2" Pin Winters, AFCO, Allstar, SCP	ALL72114	ALL72115
5x5 2-1/2" Pin Winters, AFCO, Allstar, SCP O-Ring Style	-	ALL72123
Ford Granada, Mustang II, Hybrid	ALL72126	_
GM Metric (Monte Carlo) 1978-88 (Front)	ALL72128	_

Spindle Nut Sockets

Aluminum hex style spindle nut socket features a 1/2" drive for use with a ratchet.



ALL10110..... 2-3/8" Spindle Nut Socket For 2" Pin, Allstar, PCR 5x5 And Most Wide 5 Hubs ALL10115..... 2-7/8" Spindle Nut Socket For 2-1/2" Pin, Allstar, AFCO, Winters And SCP 5x5 Hubs ALL10114..... 2-5/8" Spindle Nut Socket For 1-Ton Hubs



Deals Deals

Brian Campbell

Spindle Nut Kits

Spindle nut kits include all required hardware to retain hub and rotor to spindle or axle tube.

2" Pin Kit (Wide 5 And 5x5 Hubs)

2" pin kit for Allstar, Howe, PCR 5x5 and most Wide 5 hubs include a retaining nut, tabbed washer and a tabbed locking ring with locking screws. Retaining nut has 1-13/16"-16 RH threads.



ALL44130 Steel Spindle Nut Kit
ALL44131 Aluminum Spindle Nut Kit

ALL10110..... Spindle Nut Socket For ALL44130 And ALL44131

ALL44132 Locking Screws For ALL44130, 4-Pack ALL99172 Locking Screws For ALL44131, 4-Pack

2-1/2" Pin Kit (5x5 Hubs)

2.5" pin kit for AFCO, Winters and SCP 5x5 GN hubs includes a retaining nut, tabbed washer and a tabbed locking ring with locking screws. Retaining nut has 2-3/8"-18 RH threads.



ALL72173 Steel Spindle Nut Kit, RH ALL10115 Spindle Nut Socket For ALL72173 ALL44132 Locking Screws For ALL72173, 4-Pack

GM Nut Kit ALL72160

Kit for 1978-88 Metric Chassis stock type spindles includes a 3/4"-20 retaining nut, tabbed washer and a cotter pin.



Mustang II Kit ALL72161

Kit for most Mustang II stock type spindles includes a 13/16"-20 retaining nut, tabbed washer, crown washer and a cotter pin.



Front Hub Dust Caps

Stock replacement style dust caps.

ALL72164 GM Metric Hub, 2-3/32" O.D. **ALL72165** Ford Hub, 1-25/32" O.D.





Ford 9" Floater Housings

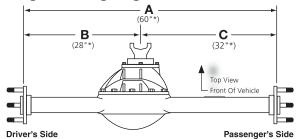


Housings are jig welded for correct alignment using all new components including a fabricated center section, new 3" O.D. x 3/16" wall axle tubes and include a vent fitting, carrier mounting studs, fill and drain plugs. Note: Axles are sold separately.

Housing Width/Offset	2.0" Pin	2.5" Pin
58"/Centered	-	ALL68820
60"/Centered	ALL68700	ALL68822
60"/2" Offset	ALL68702	-
61"/Centered	ALL68703	_
62"/Centered	ALL68704	ALL68824
62"/2" Offset	ALL68706	-
63"/2" Offset	ALL68708	-
64"/Centered	ALL68709	_

TECH TIP

Housing Measuring Diagram



Example: Bare housing ALL68702 is 60" from hub face to hub face and the pinion is located 2" to the left of the housing centerline when viewed from rear of housing.*

Notes: Please measure and inspect housing before welding brackets or painting. Housing is non-returnable if modified or custom. Welding suspension brackets on rear end housings can cause warping. Check for straightness after welding. These housings use Allstar ALL72100 inner grease seals.

*Dimensions for example only.



with all new components. The center section is centered, so the pinion yoke is offset approximately 1" to the right allowing for symmetric tube bracketry on each side. Housing includes vent, carrier studs and axle bearing retainer t-bolts. Tube diameter is 3" with 3/16" wall thickness and features large bearing Late/Torino style ends. Axles sold separately

Part No.	Axle Housing Width	Axle Housing Width w/ Axle*
ALL68830	51"	56"
ALL68832	53"	58"
ALL68834	55"	60"

*Width measurements are from axle flange to axle flange when using axles with a 2-1/2" offset.

Custom Ford 9" Housings



Custom Ford 9" housings can be built to any width and pinion location with floating axle style pins or standard flanged axle ends. Floating axle style housings are available with most 5x5 or Wide 5 hub pins. Standard flanged axle housings can be ordered with Small Ford, Early Ford or Late/Torino style ends. All housings feature new fabricated center sections, new 3" O.D. x 3/16" wall axle tubes completely jig-welded for straightness. To order please call and request a special-order form then fill in all required information and return to us with a signature attached. Housings are non-returnable and offered on a special-order basis only.

ALL68710 Custom Housing Bare
ALL68711 Custom Housing w/GM Metric Mounts

Rear End Station Brackets ALL10178

Stand adapter brackets fasten to adjustable arms of most engine stands. Supports full size car and light truck rear axle housings when servicing or



replacing differential gear sets. Position housing onto arms and secure into place with included retaining straps. (Engine stand sold separately).

Pinion Centering Jig ALL68370

Pinion centering jig fastens to the rear end housing and locates the pinion centerline when building or narrowing housings. Machined slots are designed to retain most tape measure ends for accurate measurements. Applications include GM 12 and 14-Bolt, Dana 44 and 60, Chrysler 8-3/4", and Ford 8.8" and 9" housings.

Ford 9" Truss Support ALL68330

Weld-on support adds strength to rear axle housing and reduces unwanted flex



during extreme torque. Constructed of 12 gauge (.108") steel. 36" L x 2" W.



9" Non Floater Housing Kit For GM Intermediate Metric Chassis



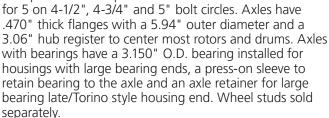
Housing kit fits the 1978-88 GM intermediate chassis. Replace a stock GM 7.5" rear-end with the much stronger Ford 9" style. Kit includes a new fabricated enter section,new axle tubes with large bearing late Ford/ Torino style ends, 31-spline axles with bearings and seals installed, drilled for studs with 5 on 4-1/2" or 5 on 4-3/4" bolt circles. Choose from two widths, 58" and 60" axle flange to axle flange.

ALL68758 Ford 9" Housing Kit 58" With GM Mounts ALL68756 Ford 9" Housing Kit 58" Without GM Mounts ALL68759 Ford 9" Housing Kit 60" With GM Mounts ALL68757 Ford 9" Housing Kit 60" Without GM Mounts

Ford 9" Cut To Fit Flanged Axles

Cut to fit 31-spline axles for Ford 9" rear ends are a great alternative to custom axles

for street, drag racing and circle track use. Axles are drilled for .687" press-in style wheel studs and have multiple wheel bolt patterns



ALL67500 Axle, 29-1/2" Long (With 10" Of Spline) **ALL67501** Axle With Bearing, 29-1/2" Long (With 10" Of Spline)

ALL67502 Axle, 33" Long (With 9" Of Spline)

ALL67503 Axle With Bearing, 33" Long (With 9" Of Spline)

Note: Axle includes a spacer which allows axle to be a replacement for 2.36" or 2.50" offset axles. Spacer is pre-installed between axle flange and bearing assembly for 2.50" offset.

Related Items

ALL44111 1/2"-20 Wheel Studs, 5-Pack ALL44117 5/8"-18 Wheel Studs, 5-Pack ALL72315 Replacement Axle Bearing

Ford 9" Housing Ends

Housing ends are welded into 3/16" wall x 3" O.D. axle tubes when building a custom width housing or converting to larger



axles. Ends feature a stepped design with a beveled welding flange to help position flange in tube for easier installation.

ALL68308..... Late/Torino Style **ALL68309**..... Early Style

Ford 9" Axle Bearing Assembly ALL72315

Replacement rear axle bearing used in many Ford car and truck rear ends. Bearing measures 3.150" O.D. to fit into Big Ford housing ends and has an I.D. of 1.565". A seal and press-on retaining sleeve are included.

Ford 9" Axle Spacer Plates

Spacer plate takes the place of drum brake backing plate and properly preloads the tapered style axle bearing. Spacers fit large bearing Ford 9" housing ends. Sold each.



ALL72318

ALL72318 Late/Torino Style **ALL72319** Early Style

Ford 9" Axle Retainers

Retainer bolts to the housing end to retain the axle/bearing into large bearing Ford 9" housings. Steel retainer is 3/16" thick and



designed to fit over axles, eliminating the need to remove bearing from axle.

ALL72316 Late Torino Style (3/8" Fasteners) ALL72317 Early Style (1/2" Fasteners)

9" Ford Backing Plate T-Bolts

Unique T-head bolts are required to fasten backing plates or brake brackets to Ford 9" housing ends. Kits include bolts, lock washers and nuts. Package of 8.



ALL72042 3/8"-24 x 1-1/4" (Late/Torino Style) **ALL72043** 1/2"-20 x 1-1/8" (Early Style)



Cole Allers



Ford 9" Axle Housing Seals

Internal seals prevent gear lube from leaking into axle tube to eliminate premature rear end failure. Seal housings are O-ring type with spring-loaded seals. For use with 3" O.D. axle tubes and most 31-spline axles. Measure I.D. of tube for proper fit.



ALL72100* ... 2.625" O.D. Fits 3/16" Wall, 3" Tube, Red **ALL72102** 2.562" O.D. Fits 7/32" Wall, 3" Tube, Blue **ALL72104** 2.500" O.D. Fits 1/4" Wall, 3" Tube, Gold

Replacement Parts

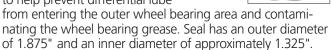
ALL72101 O-Rings For ALL72100, 3-Pack **ALL72103** O-Rings For ALL72102, 3-Pack **ALL72105** O-Rings For ALL72104, 3-Pack **ALL72108** Inner Seal

Universal Ford 9" Axle Housing Seal ALL72099

Place seal inside the axle tube near the center section to keep rear end lube in the center section area of most floating axle style rear end housings. Universal seal works with most 3" O.D. axle tubes, regardless of wall thickness. Internal seal diameter of .975" works with most 28- and 31-spline axles.

Inner Axle Snout Seal ALL72142

Seal is pressed into the outer end of a 5x5 axle tube snout (2.5") to help prevent differential lube



T-Handle Axle Puller

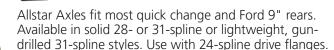
All-in-one T-handle puller threads into axle for easy installation or removal. Tool includes adapters to fit 3/8"-16 coarse or 3/8"-24 fine thread solid axles, and 3/4"-16 fine thr



solid axles, and 3/4"-16 fine thread gun-drilled axles.



Axles



Length	28-Spline Solid	31-Spline Gun-Drilled	31-Spline Solid
26-1/2"	-	ALL66265	ALL66266
27"	_	ALL66270	-
27-1/2"	ALL67276	ALL66275	ALL66276
28"	ALL67281	ALL66280	ALL66281
28-1/2"	ALL67286	ALL66285	ALL66286
29"	ALL67291	ALL66290	ALL66291
29-1/2"	ALL67296	ALL66295	ALL66296
30"	ALL67301	ALL66300	ALL66301
30-1/2"	ALL67306	ALL66305	ALL66306
31"	ALL67311	ALL66310	ALL66311
31-1/2"	ALL67316	ALL66315	ALL66316
32"	ALL67321	ALL66320	ALL66321
32-1/2"	ALL67326	ALL66325	ALL66326
33"	ALL67331	ALL66330	ALL66331
33-1/2"	ALL67336	ALL66335	ALL66336
34"	-	ALL66340	ALL66341
34-1/2"	_	ALL66345	ALL66346
35"	-	ALL66350	ALL66351
35-1/2"	_	ALL66355	ALL66356
36"	-	ALL66360	ALL66361
36-1/2"	_	ALL66365	ALL66366
37"	-	ALL66370	ALL66371
37-1/2"	_	ALL66375	ALL66376
38"	-	ALL66380	ALL66381
38-1/2"	_	ALL66385	ALL66386
39"	-	ALL66390	ALL66391
39-1/2"	_	ALL66395	ALL66396
40"	_	ALL66400	ALL66401

Axle Spline Tool ALL66104

Tool clamps in a vise to hold 31-spline axles for maintenance or installation of axle plugs. Assures perfect spline alignment when installing lock-up plugs used with locker style differentials.



Aluminum Axle Plug ALL66100

Axle plug threads into the end of a gun-drilled Allstar, Ford 9", or quick change axle to keep rear end lube out of the axles. 3/8"-24 internal thread for correct axle spacing.

Extreme Pressure Lube ALL78246

Originally used throughout the tool and die industry, this lube provides superior durability and wear protection, taking the place of anti-seize in many applications.

Recommended for spline-to-spline contact, threaded adjusters and engine fasteners. 4 ounce tube.



^{*}Use with Allstar steel and aluminum axle tubes.



Steel Axle Tubes

Steel axle tubes have a

3" O.D., a 2-5/8" I.D. and may be shortened.

	Overall Tube	Tube Length To	Axle
Part No.	Length	Inner Bearing	
Wide 5	Length	inner bearing	Length
ALL68216	25"	19-1/2"	31"
ALL68218	26"	20-1/2"	32"
ALL68220	27"	21-1/2"	33"
ALL68222	28"	22-1/2"	34"
ALL68224	29"	23-1/2"	35"
ALL68226	30"	24-1/2"	36"
ALL68228	31"	25-1/2"	37"
ALL68230	32"	26-1/2"	38"
ALL68231	32-1/2"	27"	38-1/2"
ALL68232	33"	27-1/2"	39"
ALL68234	34"	28-1/2"	40"
ALL68235	35"	29-1/2"	41"
5x5, 2-1/2" Pin,	Allstar, Winters	, AFCO	
ALL68240	22"	19-1/2"	28-1/2"
ALL68244	24"	21-1/2"	30-1/2"
ALL68246	25"	22-1/2"	31-1/2"
ALL68248	26"	23-1/2"	32-1/2"
ALL68252	28"	25-1/2"	34-1/2"
ALL68256	30"	27-1/2"	36-1/2"
ALL68258	31"	28-1/2"	37-1/2"
ALL68260	32"	29-1/2"	38-1/2"
5x5, 2" Pin, Alls	tar, Howe, Port		
ALL68264	24"	20-1/2"	30"
ALL68266	25"	21-1/2"	31"
ALL68268	26"	22-1/2"	32"
ALL68270	27"	23-1/2"	33"
ALL68272	28"	24-1/2"	34"
ALL68274	29"	25-1/2"	35"
ALL68276	30"	26-1/2"	36-1/2"
ALL68278	31"	27.75"	37-1/2"
ALL68280	32"	28.75"	38-1/2"

Wide 5 Aluminum Axle Tubes

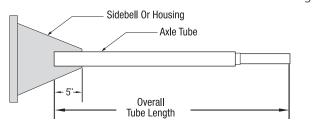
3" O.D. x 2.500" I.D. axle tubes are built from 7075-T6 aluminum and are machined for spool seal ALL72140.

Part No.	Overall Tube Length	Tube Length To Inner Bearing	Axle Length
ALL68200	25"	19-1/2"	31"
ALL68201	25-5/8"	20-1/8"	31-1/2"
ALL68202	26"	20-1/2"	32"
ALL68203	26-5/8"	21-1/8"	32-1/2"
ALL68204	27"	21-1/2"	33"
ALL68206	28"	22-1/2"	34"
ALL68208	29"	23-1/2"	35"
ALL68210	30"	24-1/2"	36"
ALL68212	32"	26-1/2"	38"
ALL68213	35"	29-1/2"	41"

TECH TIP

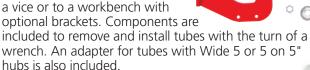
How To Measure Axle Tube Length

Tube should extend 5" into side bell or aluminum housing.



Quick Change Tube Install/Removal Tool ALL11350

Finally an easy and correct way to install and remove quick change axle tubes. Secure support tool into a vice or to a workbench with optional brackets. Components a



Related Parts

ALL11355..... Installation End Cap For Bolt-On and 2-7/8" Pin Wide 5 Tubes

ALL11351 Mounting Bracket Kit For Quick Change Tube Install/ Removal Tool



Bench Yoke

ALL11360

Bench yoke mounts to a workbench to hold transmissions, rear ends, differentials and many other items for assembly or servicing. Yoke rotates 360° and features two 10" long pivoting arms that are 1" wide by 1/2" thick. Tool is unpainted so it can be modified as needed.

Weld-On Snouts

Weld-on snouts may be used for repairing existing axle tubes or custom building new tubes. Three hub styles are available.

ALL68300

ALL68300..... Wide 5

ALL68302 5x5 2" Pin, Allstar, Howe, PCR

ALL68304..... 5x5 2-1/2" Pin, RH Thread, Allstar, Afco, Winters



Brian Shirley



"Rapid Install" **Quick Change Gear Cover**

The ultimate guick change gear cover! Speed up gear changes and never again waste time due to cover nuts! Unique design holds nuts directly on the billet 6061-T6 aluminum cover.

ALL72064 Frankland And Winters, Standard Bearing ALL72066 DMI Bulldog Rear End



Quick Change Cover Nuts ALL72060

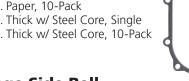
Aluminum nuts are pre-drilled for safety wire to prevent nuts from working loose and causing leaks. Nuts have 3/8"-16 threads. Package of 10.



Quick Change Cover Gaskets

ALL72050 Paper, Single **ALL72050-10**...... Paper, 10-Pack

ALL72052 Thick w/ Steel Core, Single **ALL72052-10** Thick w/ Steel Core, 10-Pack



Quick Change Side Bell O-Ring ALL72054

Replacement O-ring for Winters quick change.



Axle Tube Oil Seal ALL72140

Also called a spool seal, it fits Frankland, Winters, and other quick change rear ends. Seal is pressed into side bell or axle tube and seats against the bearing flange of the spool to prevent lube from leaking into axle tubes. Seal has a 1-15/16" I.D. and a 2-5/8" O.D.



ALL72052

Drive Flange Gaskets

Steel core gaskets help prevent leaking issues commonly found with standard paper gaskets. Package of 2.

ALL72074 8-Bolt **ALL72075** 5-Bolt



Quick Change Gear Case

ALL14355

Sturdy composite storage case protects and holds up to 8 sets of quick change gears. Case has molded in carrying handles and metal hinges. 5" x 8" x 15-1/2" overall when closed.



Aluminum Quick Change Drain Pan ALL14166

Aluminum drain pan is handy when changing quick change gears. Built-in perforated shelf holds gears and allows lube to drain into pan. Pan is 10-1/4" wide, 12" long and 3-3/4" deep.

Quick Change Jack Post Brackets

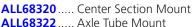
Brackets bolt to quick change rear end, providing a location to jack the car.

ALL68346 Steel Bracket ALL68347 Aluminum Bracket



QC Axle Tube Support Brackets

Brackets provide mounting points for a strut rod assembly to help eliminate flex found in quick change rear ends. ALL68320 attaches to the side bell bolts on most quick change rear ends. ALL68322 has tabs with 1/2" holes and mounts directly onto a 3" axle tube.







Brandon Overton



Quick Change Gear Totes



Durable plastic quick change gear tote organizes extra gear sets and keeps them clean. Lid snaps shut to hold gears in place. 8"L x 5"W x 2"H.

Description	Single	10-Pack
White	ALL14350	ALL14350-10
Black	ALL14351	ALL14351-10
Yellow, 6-Spline (Midget) Gear Set	ALL14352	ALL14352-10

Gear Tote Tray

ALL12269

Neatly organize up to 10 quick change gear tote boxes vertically. Tray is 21" long x 5-1/2" deep with a 4" tall front edge making them per-





Ring And Pinion Installation Kits

Allstar ring and pinion installation kits are available with or without bearings. Kits contain all the hard-to-find individual parts for a quick, trouble-free installation.

Bearing Kits Include:*

- Pinion And Side (Carrier) Bearings
- Pinion Seal
- Pinion Depth Shims
- Adjustable Side (Carrier) Shims
- Crush Sleeve Or Solid Spacer
- Pinion Nut
- One Ounce Tube Of Silicone Or Gasket
- Gear Marking Compound
- Ring Gear Bolts

Shim Kits Include:*

- Pinion Seal
- Pinion Depth Shims
- Adjustable Side (Carrier) Shims, Two (If Applicable)
- Crush Sleeve Or Solid Spacer
- Pinion Nut
- One Ounce Tube Of Silicone Or Gasket
- Gear Marking Compound
- Ring Gear Bolts



*Kit components shown for reference only, specific components will vary depending on application.

Bearing Kit	Shim Kit	Carrier Type	Application
General Motors		.,,,,,	т. р ричины
ALL68515	ALL68615	10-Bolt	7.5", Passenger And Light Truck S-10 1982-1998
-	ALL68616	10-Bolt	7.5", Passenger, Except Monza 1977-1981
-	ALL68622	10-Bolt	8.2", Chevy Passenger And G-10 Van, 30-Spline Pinion
ALL68521	ALL68621	10-Bolt	8.5", 30-Spline Pinion Passenger And Light Truck 1964-72
ALL68518	ALL68618	12-Bolt	8.875", Chevy And GMC Truck And Blazer, 1.438" Pinion 1970-98
ALL68519	ALL68619	12-Bolt	8.875", Chevy Hi-Performance Passenger Axle, 1.625" Pinion
Chrysler			
ALL68532	ALL68631	8-3/4"	489 Casting With 2.000" I.D. Carrier Bearings (Large #9 On Side Of Casting)
ALL68531	ALL68631	8-3/4"	489 Casting With 1.796" I.D. Carrier Bearings (Large #9 On Side Of Casting)
ALL68537	ALL68637	8-3/4"	742 Casting With 1.796" I.D. Carrier Bearings (Large #2 On Side Of Casting)
Ford Motor Con	npany		
_	ALL68639	8"	"Pig" Type, 25-Spline Pinion
ALL68513	ALL68613	8.8"	Salisbury Type With 10-Bolt Cover, 30-Spline Pinion
ALL68510	ALL68610	9"	2.893" Carrier Bearing, Stock 28-Spline Pinion Support, Solid Spacer
ALL68511	ALL68611	9"	2.893" Carrier Bearing, Stock 28-Spline Pinion Support, Crush Sleeve
ALL68509	ALL68610	9"	3.062" Carrier Bearing, Stock 28-Spline Pinion Support, Solid Spacer
ALL68512	ALL68611	9"	3.062" Carrier Bearing, Stock 28-Spline Pinion Support, Crush Sleeve
ALL68539	ALL68610	9"	3.062 " Carrier Bearing, Daytona 28-Spline Pinion Support, Solid Spacer
ALL68538	ALL68611	9"	3.062" Carrier Bearing, Daytona 28-Spline Pinion Support, Crush Sleeve
ALL68543	ALL68610	9"	3.250" Carrier Bearing, Daytona 28-Spline Pinion Support, Solid Spacer
ALL68542	ALL68611	9"	3.250" Carrier Bearing, Daytona 28-Spline Pinion Support, Crush Sleeve
ALL68540	_	9"	3.250" Carrier Bearing, MW or Strange 28-Spline Pinion Support, No Spacer Or Crush Sleeve
ALL68541	_	9"	3.250" Carrier Bearing, MW or Strange 35-Spline Pinion Support, No Spacer Or Crush Sleeve
Dana			
ALL68533	ALL68633	_	Model 44/1967-1997
ALL68534	ALL68634	_	Model 60 And 61/1966-1998



Dial Indicator With Magnetic Base

ALL96414

Dial indicator with magnetic base is a necessity when degreeing a camshaft, checking crankshaft end play, deck heights, dome heights, transmission end play or ring and pinion backlash. Universal magnetic base may be mounted anywhere. Shockproof dial indicator has 1" of travel in .001" increments. Base and dial indicator may also be purchased separately.

ALL96415 Dial Indicator Only ALL96416 Magnetic Base Only

Digital Calipers 0-6" With Case ALL96411

Measure inside, outside and depth dimensions with easy to read Metric or SAE LCD display,

in .001" increments up to 6". On/off switch conserves battery and zero setting assures accurate readings. Plastic case provides additional battery storage.

Dial Caliper ALL96410

Quality hardened stainless steel dial caliper is shockproof and capable of measuring items from

.001" to 6" in increments of .001". Includes protective carrying case.



Cameron McMillen



Terry McMillen

Ring And Pinion Gear Sets

Quality differential components are suitable for race, street and off-road use. Lapped in matched sets for quiet operation.



Sets fit 10-bolt with 7.5" ring gear, 1.438" diameter pinion stem and 27-spline pinion.

Part No.	Ratio	Tooth	Part No.	Ratio	Tooth
ALL70110*	3.23	42-13	ALL70115 [†]	3.73	41-11
ALL70112*	3.42	41-12	ALL70116*	4.10	41-10
ALL70113 [†]	3.42	41-12	ALL70117 [†]	4.10	41-10
ALL70114*	3.73	41-11	ALL70118*	4.56	41-9

*Set includes standard width ring gear for use with 3.23 and numerically higher ratio carriers or when using 3.08 and numerically lower ratio carriers and ALL 70100 spacer

†Set includes thick ring gear for use with 3.08 and numerically lower ratio carriers.

GM 8.5"

Sets fit 10-bolt with 8.5" ring gear, 1.625" diameter pinion stem and 30-spline pinion.

Part No.	Ratio	Tooth	Part No.	Ratio	Tooth
ALL70120	3.08	40-13	ALL70126	4.10	41-10
ALL70122	3.42	41-12	ALL70128	4.56	41-9
ALI 7012/	2 72	/11_11			

Ford 9"

Sets fit 10-bolt with 9" ring gear, 1.313" diameter pinion stem and 28-spline pinion.

Part No.	Ratio	Tooth	Part No.	Ratio	Tooth
ALL70010	3.50	35-10	ALL70028	5.14	36-7
ALL70012	3.70	37-10	ALL70030	5.29	37-7
ALL70014	3.89	35-9	ALL70032	5.43	38-7
ALL70016	4.11	37-9	ALL70034	5.67	34-6
ALL70018	4.33	39-9	ALL70036	5.83	35-6
ALL70020	4.56	41-9	ALL70038	6.00	30-5
ALL70022	4.71	33-7	ALL70040	6.20	31-5
ALL70024	4.86	34-7	ALL70042	6.33	38-6
ALL70026	5.00	30-6	ALL70044	6.50	39-6

GM 7.5" Ring Gear Spacer ALL70100

Spacer allows installation of 3.23 and numerically higher ratio gear sets with standard thickness ring gears into

3.08 and numerically lower carriers. Steel spacer is .3125" thick and includes ten 7/16"-20 x 1-1/4" UHL LH bolts.

Gear Marking Compound Kit

Gear marking compound kit is a good way to identify correct gear contact area when installing or adjusting ring and pinion gear sets. Kit includes gear marking compound and application brush.





Spools

Spools are substantially lighter than conventional cast iron carriers, and lock booth rear axles together to deliver equal power to both rear wheels. Ultra-lite steel spools have more lightening holes and a narrower ring gear flange than standard units to help reduce rotating weight.



Ford 9" Steel Spools

ALL68060 28-Spline, Scalloped, 7.5 Lbs. **ALL68062** 28-Spline, Ultra-Lite, 6.3 Lbs.

ALL68063 28-Spline, Ultra-Lite Scalloped, 6.0 Lbs.

ALL68064..... 31-Spline, Scalloped, 7.6 Lbs. **ALL68066**..... 31-Spline, Ultra-Lite, 6.1 Lbs.

ALL68067 31-Spline, Ultra-Lite Scalloped, 5.8 Lbs. **ALL68070** 35-Spline, For 3.250" Case, 7.6 Lbs.

ALL68072 35-Spline, For 2.893 " Or 3.062 " Case, 7.9 Lbs.

ALL68074 40-Spline, For 3.250" Case, 6.7 Lbs.

Aluminum Spools

ALL68114 Quick Change Winters, 31-Spline, 2.030" Bearings ALL68115 Quick Change D.M.I., Frankland, Tiger And

Richmond, 31-Spline, 2" Bearings

Mini Spools

Mini spool assemblies replace the OE side and spider gears in open style carriers to provide equal trac-



ALL68122

tion to both axles. Mini spools are precisely machined for proper fit and heat treated for durability.

- •1957-87 Ford 9" Rear Ends With 3/4" Cross Pin
- •1981-94 Ford 8.8" Rear Ends With 28-Spline Axles
- •1976-88 GM 7.5" With 7.5" Or 7.625" Ring Gear, 26-Spline Axles
- •1964-72 GM 10-Bolt With 8.2" Dia. Ring Gear, 28-Spline Axles
- •1970-76 GM 10-Bolt With 8.5" Dia. Ring Gear, 28-Spline Axles
- •1965-76 GM 12-Bolt With 8.875" Dia. Ring Gear, 30-Spline Axles

ALL68121 Ford 9", (Lightweight) 28-Spline ALL68122 Ford 9", (Lightweight) 31-Spline

ALL68168 Ford 8.8", 28-Spline

ALL68166[‡] GM (7.5" Ring Gear), 26-Spline

ALL68165 GM 12-Bolt (8.875" Ring Gear)

ALL68162 GM 10-Bolt (8.2" Ring Gear), 28-Spline ALL68160 GM 10-Bolt (8.5" Ring Gear), 28-Spline ALL68164 GM 12-Bolt (8.875" Ring Gear), 30-Spline

‡There are at least three different 7.5" GM cases available, shimming may be required between the case and side gear of the spool to eliminate space between blocks

Cross Pins

ALL68120 Ford 8.8" And 9" (3/4") ALL68120 **ALL68167** GM 10-Bolt (7.5" Ring Gear) **ALL68163** GM 10-Bolt (8.2" Ring Gear) **ALL68161** GM 10-Bolt (8.5" Ring Gear)

GM Axle C-Clips

Replacement C-clips for popular GM 10 and 12-bolt axles. Package of 2.

ALL66120 10-Bolt (7.5")

ALL66121 10-Bolt (8.5") and 12-Bolt (8.875")

Ford 9" Housing Studs **ALL72040**

Studs secure the center section to the housing and are installed by pulling through with a nut for a press fit. 3/8"-24 threads. Package of 10.

Ford 9" Gaskets

Gaskets are precision die-cut to ensure a leak free seal.

ALL72044 Paper

ALL72045 Composite With Steel Core



ALL72044

Absorbent Mats

A must for the work shop and trailer. These handy absorbent mats have bonded layers, allowing fluid to spread quickly through material.

ALL12030 15" x 60" Roll (Perforated Every 10") Universal For All Fluid Types (Oil, Coolant, Water)

ALL12031...... 15" x 60" Roll (Perforated Every 10") For Oil Only ALL12032 100-Pack (15" x 10" Individual Sheets) Universal For All Fluid Types (Oil, Coolant, Water)

ALL12033...... 100-Pack (15" x 10" Individual Sheets) For Oil Only



Andy Barr



Ford 9" Pinion Support ALL68396

"Daytona" forged aluminum pinion support replaces original equipment cast iron support. Support is furnished with races installed and is for use with 28-spline pinion gears.



Pinion Seals

Replace leaking or damaged seals in most popular differentials.

ALL72145 Quick Change 5/16" Wide ALL72144 Quick Change 1/2" Wide ALL72143 Quick Change 3/4" Wide

ALL72146 Ford 9" Standard, 28-Spline, 3" O.D.

ALL72147 7.5" GM **ALL72148** 8.5" GM

Pinion Yokes







Part No.	Spline	U-Joint	Width	Cap Dia.	Material	Length
Ford 9" Yo	kes					
ALL68384	28	1310	3-1/4"	1.062"	Aluminum	Standard
ALL68375	28	1310	3-1/4"	1.062"	Cast Steel	Standard
ALL68376	28	1330	3-5/8"	1.125"	Cast Steel	Standard
ALL68377	28	1330	3-5/8"	1.125"	Cast Steel	1" Longer
ALL68380	28	1350	3-5/8"	1.187"	Forged Steel	Standard
ALL68382	35	1350	3-5/8"	1.187"	Forged Steel	Standard
Quick Cha	Quick Change Yokes					
ALL68385	10	1310	3-1/4"	1.062"	Cast Steel	Standard
ALL68386	10	1310	3-1/4"	1.062"	Cast Steel	1" Longer

Billet Quick Change Pinion Yokes

Billet steel pinion yokes offer superior strength while the longer unit gives you an option to use a shorter driveshaft. For use with 1310 series 3-1/4" wide U-joint.

ALL68387 Standard Length ALL68388 1" Longer

Pinion Nuts

Replace original worn or damaged nuts each time a gear set is changed. Nut secures driveshaft yoke to pinion gear.

ALL72155 Ford 8.8" And Standard 9" **ALL72156** GM 7.5 And 8.5

Pinion Yoke Wrench ALL68372

Wrench fastens to most popular pinion flanges and companion flanges to hold when setting bearing pre-load and tightening retaining bolt or nut.



U-Joints

Performance U-joints are greasable and fit a variety of driveshaft combinations.

1310 Series: 3.218" Wide with 1.062" Diameter Caps **1330 Series:** 3.622" Wide with 1.062" Diameter Caps **1350 Series:** 3.622" Wide with 1.187" Diameter Caps

U-Joints With Same Cross Width

ALL69030 1310 Series **ALL69031** 1330 Series **ALL69032** 1350 Series

U-Joints With Different Cross Widths

ALL69034..... 1310 to 1330 ALL69037*... 1310 to 1330 ALL69035..... 1310 to 1350 ALL69036..... 1330 to 1350

*Standard 1330 spread with larger 1.125" diameter caps.



Width = B, Caps = A

U-Bolt Kits

U-bolt kits for 1310, 1330 and 1350 series U-joints secure drive-shaft to pinion yoke. Sold in pairs with nuts and lock washers.



	U-Bolt	U-Joint Series	Сар	Thread	"A"	Stud CTC "B"
Std.	ALL69015	1310/1330	1-1/16"	5/16"-24	1-3/4"	1.400"
X-Long	ALL69017	1310/1330	1-1/16"	5/16"-24	2"	1.400"
Std.	ALL69018	1330 [†]	1-1/8"	5/16"-24	1-7/8"	1.575"
Std.	ALL69016	1350	1-3/16"	3/8"-24	2"	1.625"

^{†1330} with big caps (1.125")

GM U-Joint Strap Kit ALL69014

Replacement O.E. style U-joint strap kit fits popular GM pinion yokes including 7.5", 8.2", 8.5" 10-bolt and other popular rear ends. Kit is designed for 1-1/8" (1.125") diameter caps and includes (2) 5/8" wide steel straps with 1-7/8" CTC holes and (4) 1-1/2" long 5/16"-24 grade 8 bolts.

Ford 9" U-Joint Girdle Kit

ALL69025

Aluminum U-joint girdles replace standard steel U-bolts

and provide more surface clamping area for 1310 and 1330 (1-1/16") U-joint caps. Girdle design helps prevent over-tightening and includes mounting hardware.





Steel Driveshafts



Driveshafts are built from 2-1/2" O.D. x .065" wall, D.O.M. steel tubing, balanced, painted white and completely assembled with greaseable 1310 series (3-1/4") U-joints. Driveshafts also include a popular 27-spline slip voke to work with Powerglide, TH350, Bert, Brinn and many other transmissions. Yoke measures 5.50" from U-joint centerline to end with 3.50" of slip length. Dimensions listed are from center to center of U-joints.

ALL69019 29.5" ALL69020 30.5" ALL69022 31.5" ALL69023 32" ALL69024 32.5"

Related Parts

ALL69015 U-Bolt Kit ALL69030 1310 U-Joint

Slip Yokes

Slip yokes provide an important link in today's driveline and chassis combinations. Yokes are available in standard length for most street applications with minimal suspension travel to extra-long for racing suspensions that have a radical amount of travel. 27-spline yokes accept 1310 style U-joints and are for use in many popular transmissions including TH350, TH700R4, Muncie and Saginaw 3 and 4 speeds, Bert and Brinn non-ball spline.

ALL69040 6" ALL69042 6-3/4" ALL69044..... 7-1/2" ALL69046 8"

ALL69048 8" (Extra Clearance)

Hardened

ALL69043 6-3/4" ALL69045 7-1/2" ALL69047 8"

Tailshaft Seal And Bushing

The tailshaft bushing is a regular wear item, located inside the transmission tailshaft housing. It should be replaced when replacing the tailshaft seal or ALL72152 when a driveshaft failure has occurred. A worn bushing will cause excessive side-to-side movement of the slip yoke and create a vibration or leak. Replacement bushing and seal fits GM Powerglide, Turbo 350, Saginaw, Muncie, Bert and Brinn transmissions.

ALL72150 Seal

ALL72152 Seal With Bushing

Universal Driveshaft Loop ALL69000

Universal driveshaft loop contains the driveshaft if a voke or U-joint fails. Loop is 1/4" thick x 2" wide mild steel and fully adjustable to fit most cars.

Driveshaft Loop For 1979-2004

Mustangs ALL69006

Driveshaft safety loop bolts-on to help retain the front of the driveshaft in the event of a U-joint or other drivetrain component breakage. Black epoxy coated, all steel loop includes mounting hardware and complete instructions. Loop is designed to fit inside factory tunnel and work with most driveshafts up to 4" in diameter.

Unwelded Driveshaft Loop

ALL69004

Δ1169042

ALI 69043

4-3/4"

Made from 3/16" flat steel, loop is 9-1/2" tall, 5-1/2" wide with a 16" wide mounting strap that can be cut and welded for each installation.

180° Driveshaft Loop ALL69002

Pre-bent 1" diameter x .083" wall mild steel tubing is designed for chassis style cars to help retain the driveshaft in the event of a U-joint failure. Loop is 10" tall overall and has a 5" I.D.

Torque Tube Belt ALL10181

Universal strap keeps torque tube stabilized and centered in case of coupler

or tube failure. Black 3" wide belt fits all torque tube and chassis combinations.

Torque Ball Safety Blanket ALL55220

Fire resistant safety blanket designed by Jason Meyers Racing protects drivers legs and feet in the event of a U-joint failure. Ballistic nylon covered blanket weighs just 1-1/2 lbs. and has quick release adjustable straps that

allow blanket to be removed easily for servicing torque ball and U-joint. Blanket includes two mounting brackets, mounting studs, nuts and installation instructions.

Replacement Parts

ALL55224 3/8" Mounting Stud Kit ALL55226 Mounting Tabs, 1-Pair





Drain Pan ALL40112

Round drain pan has molded in handles and pour spout. Made from chemical and solvent resistant plastic. 13-1/2" x 11" x 4", 7 quart capacity.



Shop Towels ALL12006

Shop towels are much heavier than standard paper towels and work great for numerous tasks around the shop or track. Rolls contain 60 individually perforated 11" x 9-1/2" disposable sheets.



Drain Pan ALL14171

Drain pan with built-in pump holds and refills fluids when changing rear end gears. Molded plastic basin and lid slide together to prevent spilling of fluid. A crank handle is included for hand operation along with a length of straight hex shaft for use with an electric drill. 16" square x 7" tall. 14 quart capacity.

Aluminum Quick Change Drain Pan ALL14166

Aluminum drain pan is handy when changing quick change gears.
Built-in perforated shelf holds gears and allows lube to drain into pan. Pan is 10-1/4" wide, 12" long and 3-3/4" deep.



Drain Plug Kits

Drain plug kits include a machined weld-on bung that has a step added to fit inside a drilled hole for easy installation. Kits are perfect when adding drain plugs to oil pans, rear end housings, dry sump tanks, etc.



Size	Aluminum Bung	Steel Bung
3/8"NPT	ALL50732	ALL50733
1/2"NPT	ALL50734	ALL50735

Fill Line Kit for Transmissions and Rear Ends ALL36148

Kit includes the components to build a fill hose for attaching remote fill tanks with a 10AN outlet to transmission or rear end. Kit includes a 3ft length of flexible braided fabric hose and two 10AN hose ends, one straight 10AN fitting for connecting hose to breather tank and a 90-degree 10AN fitting with a 10AN to 1/2" NPT adapter for attaching to rear end or transmission. Additional adapter fittings may be required and are sold separately.

Combo Remote Fill Tank

ALL36134

Aluminum fill tank features a pre-drilled 4-1/2" square mounting flange for securing tank to the underside of deck panel providing an easy access fill location for rear end/differential, transmission, power steering or dry sump tank. Tank has a raised non-vented cap and a -10AN male lower hose fitting. Tank also has a 3/8" NPT side port for a return or vent and a separate 1/4" NPT fitting with an integrated foam filter for an additional vent.

Remote Fill Tanks

Aluminum tanks feature a 5-3/8" mounting flange to mount in a deck panel or other flat horizontal panel, providing an easy access fill location for rear end/differentials, transmissions or dry sump tanks. Tanks have a raised,



vented twist on cap and a -10AN male hose connection. Overall tank height is 9" x 3" in diameter.

ALL36110 Fill Tank

ALL36111 Fill Tank With 3/8"NPT Bung

ALL36124 Replacement Cap

Mini Breather Tanks

Small capacity, spun aluminum tank will vent dry sump tank, transmission or rear end. Tank has a 1/4"NPT bung on bottom and a clamp style bracket for mounting to chassis tubing.

ALL36140 Tank For 1-1/2" Dia. Tubing ALL36141 Tank For To 1-3/4" Dia. Tubing ALL36142 Tank With Flat Mount

Mini Breather ALL36145

Compact breather mounts in a deck or bracket with a 7/16" hole and has a -4AN male end making it ideal for venting transmissions or rear ends.

Clamp-On Mini Breathers

Breathers mount easily to either 1-1/2" or 1-3/4" tubing. Breathers are 1" tall and 1-3/8" in diameter. Great for use on transmissions, differentials, etc. Bottom fitting is 1/4"NPT. Black anodized finish.

ALL36106 Breather For 1-1/2" Tubing ALL36107 Breather For 1-3/4" Tubing ALL36103 Replacement Filter Only





Roll Bar Padding

Closed-cell foam does not absorb moisture, but progressively absorbs shock (gets more dense as it is compressed). Offset inside diameter



allows easy installation, with thicker padding toward driver. Available in 3' lengths.

ALL14100	Black
ALL14101	Red
ALL14102	Blue
ALL14103	Orange

ALL14104 Yellow **ALL14105** Gray **ALL14106** Purple

SFI Mini Roll Bar Padding ALL14112

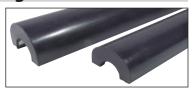
Mini roll bar padding is ideal for tight areas in a race car when standard padding is too large. Unique, compact design provides driver protec-



tion to a specific area. Peel- and-stick backing for easy installation on 1-1/4" to 1-3/4" tubing. Meets SFI 45.1 specifications. Sold in 3' lengths, black only.

SFI Roll Bar Padding

Provides 180° coverage where space concerns are not a problem. Peeland-stick backing for easy installation. Meets SFI 45.1 specifications.



Choose from two sizes, each 3' long, black only.

ALL14110 1-1/8" To 1-1/2" O.D. Tubing ALL14111 1-5/8" To 2" O.D. Tubing

Door Bar Padding **ALL14115**

Closed cell padding adds protection from hard surfaces inside a race car.



Cover door bars, seat supports, or increase padding in seat for comfort. Sold in 36" x 48" sheets, 3/4" thick.

Door Bar Clamp ALL14198

Clamp fastens around a 1-1/2" door bar, allowing a steel door plate to be mounted to the outside of the door bar area. Clamp eliminates the need to weld mounting tabs or door plate directly to a finished chassis. Sold each and includes 1/2" mounting hardware.

Related Items

ALL54070 18" x 26" Steel Plate ALL54071 24" x 24" Steel Plate ALL54072 24" x 36" Steel Plate



Sprint Knee Guard ALL55230

Ultra light aluminum knee guard designed by Jason Meyers Racing works great for protecting knees from banging against 1/2 box steering gears and provides a comfortable leg support when throttling through corners.

Fire retardant, high-impact, dense rubber padding is covered with self-extinguishing cloth for added safety. Guard fastens to the half box mount (not the box) by drilling and bolting or riveting and is held in place with safety wire or a wire tie.

Window Net Installation Kits

Latch Type Round Tube ALL10217

Lever latch release has a 3/8" round upper support rod for use with border and loop style nets. Mounting brackets are included.

Latch Type Flat Bar ALL10218



Lever latch release has a 1" x 1/8" x 29" flat steel bar to securely anchor the window net, and mounting brackets. Use with loop style nets. Will not work with most border type nets.

Replacement Part

ALL99070 Replacement Mounting Tabs

Spring Loaded Round Tube ALL10219

0-0000

Spring-loaded tube eliminates the latch release and provides easy entry and exit. Pushing against the handle allows the spring loaded rod to compress approximately 3/4" to release or fasten window net. Kit includes a 26-1/2" long x 9/16" diameter spring loaded top tube. 3/4" flat aluminum strap for securing the bottom of the net, mounting hardware, handle and instructions. Designed for most border and loop style nets.

Replacement Part

ALL99071 Replacement Mounting Tabs

Clamp-On Kits

ALL10222 1-3/4" Kit

Clamp-on kit eliminates welding tabs to chassis. Clamps have .600" holes designed to install ALL10219 window net installation kit to chassis tubing.





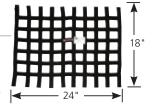
Replacement Parts ALL99160 1-1/2" Clamp-On Bracket, Fixed **ALL99161** 1-1/2" Clamp-On Bracket, Swivel ALL99162 1-3/4" Clamp-On Bracket, Fixed

ALL99163 1-3/4" Clamp-On Bracket, Swivel



Loop Style Ribbon Window Nets

Durable polypropylene nets are ideal for a variety of full bodied cars. Webbing is double stitched with heavy nylon thread. All nets meet SFI 27.1 specifications and



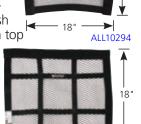
are appropriately tagged. Loop design net has loops sewn in top and bottom of net to accept most round tube and flat bar window net installation kits.

ALL10290 18" x 18" Black **ALL10295** 18" x 24" Black

Mesh Window Nets

Durable, lightweight, black polyester mesh nets increase driver vision and stop smaller debris better than conventional ribbon or string nets. Mesh style net has large built-in sleeves in top

and bottom of net to accept most round tube and flat bar window net installation kits. SFI Rated (27.1)



Non-SFI

ALL10294 18"H x 18"W ALL10298 18"H x 22"W ALL10299 18"H x 27"W x 22"W (Angled)

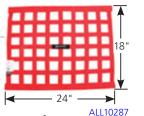


ALL10211...... 18"H x 22"W

ALL10214...... 18"H x 27"W X 22"W (Angled)

Border Style Ribbon Window Nets

Durable polypropylene nets are available in a variety of sizes and offer additional safety to the driver. Webbing is double stitched with heavy nylon thread. Border style



ALL10211

net has built-in sleeves in top and bottom of net to accept most round tube window net installation kits including ALL10217 and ALL10219. SFI certified nets meet SFI 27.1 specifications and are appropriately tagged.

Non-SFI

ALL10248 10"H x 18"W Black **ALL10249** 14"H x 18"W Black

SFI Rated (27.1)

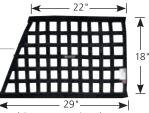
ALL10280 18"H x 18"W Black **ALL10285** 18"H x 24"W Black **ALL10286** 18"H x 24"W Blue **ALL10287** 18"H x 24"W Red

Window Net Protector ALL10225

A simple way to keep your window net tight against an interior panel. Slot is 21" long for use with 18" wide nets.



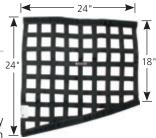
Angled net with border style mounting encloses more of the driver side window opening for additional protection.



Net meets SFI 27.1 specification and is appropriately tagged. Net has built-in top and bottom sleeves to accept most round tube window net installation kits including ALL10217 and ALL10219.

Drag Window Net ALL10289

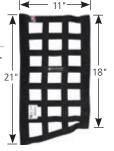
Drag window net with border style mounting attaches to the diagonal door bar of most drag cars. Net meets SFI 27.1 specification and is appropriately tagged. Net has top and bottom



built-in sleeves to accept most round tube window net installation kits including ALL10217 and ALL10219.

Funny Car Style Window Net ALL10291

Border style window net has built-in vertical sleeves for installing mounting rods to attach net to the chassis. Net is ideal for cages that have been fitted with or updated to funny car style bars around the driver. Net is SFI 27.1 certified.



Triangle Window Net ALL10246

Triangle net originally designed for Sprints and Midgets also works well on Dirt Late Models and Modifieds when wrap-around ends are needed. Net includes quick release buckle and meets SFI 37.1 specs.

Border Style Triangle Window Net ALL10247

Triangle window net has a border style top for use with most round tube installation kits. Lower portion of net secures around a lower bar.

Molded Steering Wheel Pad ALL52322

Molded pad fits flat or dished 3-spoke steering wheels. Velcro straps are permanently secured to pad for quick installation.



Steering Wheel Pad ALL52320

Black vinyl covered pad fastens to most three spoke racing steering wheels with three hook/loop straps. 5-3/4" diameter foam pad is 2" thick.





Two Point Non-Retractable

Seat Belts

Two-point, non-retractable lap belt is manually tightened and mounts to two points on the vehicle floor. Belts feature an easy push-button release and are sold individually. Installation hardware kits sold separately.





Related Parts

ALL98120 Anchor Plates, 1-Pair ALL98121 Installation Hardware Kit

Three Point Retractable Seat Belts

Three-point retractable system has three anchoring points, two on the vehicle floor and one on the B-pillar. Belts feature an easy push-button release and are sold each. Installation hardware kits sold separately.

ALL98115 Black **ALL98116** Gray **ALL98117** Charcoal

ALL98118 Tan

Related Parts
ALL98120 Anchor Plates, 1-Pair
ALL98121 Installation Hardware Kit

Seat Belt Anchors ALL98120

Anchor plates reinforce stock type floor pan when mounting seat belts. Plates are 1/8" thick and have a 9/16" mounting hole. Package of 2.



Seat Track **_** Assembly

ALL98100

Mount aftermarket seats quickly and easily. Includes two seat tracks, adjustment handle and hardware.



Bolt-In Lower Seat Mount Brackets ALL98130

Seat brackets are constructed of 3/16" aluminum and designed to fasten an aluminum racing seat to a reinforced stock style floor pan. Additional floor reinforcements recommended as required per sanctioning body rules.

Tear Off Machine



Electric Tear Off machine will quickly provide clear vision with the simple push of a button. Lightweight unit mounts to your shield and includes two clear rolls of 50 foot film (equal to 65 standard tear offs), sealed aluminum motor housing, quick disconnects, and velcro. Works with 12 and 16 volt systems. Choose Installation kit with steering wheel or dash mount button, sold separately.

ALL13104..... Electric Tear Off Machine

ALL13106...... Install Kit, Vehicle Harness & Steering Wheel Button

ALL13107..... Install Kit, Vehicle Harness & Dash Mount Button

ALL13108..... Replacement Rolls Of Film (2-Pack) **ALL13109**..... Replacement Vehicle Harness

Locking Tear Off Post Kit

ALL13100

Unique aluminum tear off posts have a second set-screw locking the posts to the shield so they don't continually come loose. No need to remove shield just to tighten the tear off post! Package of 2.

Safety Glasses

ALL10258

Comfortable, lightweight, general purpose safety glasses have a clear wrap around lens

for maximum visibility. ANSI-Z87.1 rated.

Reusable Corded Earplugs **ALL12000**

Corded earplugs fit instantly without rolling or squeezing. Made of a soft material that cleans up easily in warm, soapy water.

Helmet Hooks

Lightweight aluminum hook clamps on roll cage tubing and provides an anchor for attaching helmet strap.

ALL10228 1-1/2" **ALL10229** 1-3/4"

ALL10445 Reducer Bushing 1-3/4" To 1-5/8"

Universal Helmet Hook ALL10223

Lightweight, steel universal helmet hook is 1/8" thick and has a radius mount for attaching to round tubing. Hook may be welded on or clamped to tube with a standard hose clamp.





Inside Air Blower Motor

ALL13000

Inside air unit is commonly mounted inside the cockpit or decking to provide forced, filtered air to the driver for cooling and to help prevent shield fogging. Spun aluminum cover prevents damage to filter assembly. Motor has two speeds and is recommended for 12 volt systems.

Replacement Parts

ALL13014..... Filter **ALL99022**..... Top

Outside Air Blower Motor ALL13001

Outside air unit is commonly mounted inside the driver compartment on vehicles with windows or closed compartment to provide forced, filtered air to the driver for cooling and to help prevent shield fogging. Intake top can be used with 1-1/4" helmet hose or trimmed to accept larger 3" hose, such as ALL42150, routed to the motor from outside of the car or fastened to a plastic duct, such as ALL42143, for fresh air. Motor has two speeds and is recommended for 12 volt systems.

Replacement Parts

ALL13014..... Filter **ALL99023**..... Top

Helmet Fan ALL13011

Compact inline blower fan connects to 1-1/4" helmet hose and forces air inside driver's helmets equipped with an air inlet to help prevent shield fogging and provide air movement. Fan produces 20+ cfm of air flow when used on a 12V system, drawing only 1.3 amps. Two wire pigtail easily connects to a switched 12V power source and a suitable chassis ground.

Helmet Vent Hose

Hose is 4' long and used to complete the connection between a driver air system and helmets equipped with a 1-1/4" barbed intake port. Two styles are available: ALL13004 is gray and constructed from a denser material to resist

crushing and abrasions from rocks and debris;
ALL13021 is black and constructed of a thinner
more pliable material which is less restrictive to the driver.

ALL13004 Gray **ALL13021** Black

Helmet Vent ALL13025

High-impact, screened ABS vent minimizes the chance of rocks and other debris from entering helmet hose. Vent has a 1/2" wide mounting flange and a centered outlet that accepts most 1-1/4" helmet hoses.



Helmet Blower System

Remote mount breather system directs filtered, forced air to the driver's helmet for added comfort and safety. Motor assembly has a mounting bracket for easy mounting to chassis or seat back. 4' helmet hose connects to most helmet fresh air intakes with standard 1-1/4" connector. The

9' extension lead can be easily connected to a switched 12-16 volt source. This system weighs 2-1/4 lbs, and draws 3.5 amps at 13.6 volts, and produces about 90 CFM of air to the driver, providing more than enough air to keep the driver cool and shield clear.

ALL13020 Silver **ALL13022** Black

Replacement Parts

ALL36202 Filter

ALL36203 Filter With Shield ALL99021 Wire Harness

Mini Helmet Air System ALL13012

Self-contained, 12-volt fan with reusable filter moves approximately 40-60 CFM of air depending on system voltage. An RF connector



allows easy, unrestricted helmet removal. A 14" wire is permanently attached to the fan and accepts the 24" pigtail (included). Pigtail has simple red (+) and black (-) wire hook-ups.

Hose Adapter ALL13007

Adapter fits most helmet hoses with 1-1/4" ends and has a 2-3/4" O.D. to fit inside 3" duct style hose or inside some NACA ducts. Adapter may also be mounted in a window opening to funnel air directly to the driver via helmet hose.

Helmet Dryer ALL13018

Dryer is a table top unit that circulates air throughout the inside of a helmet removing moisture that commonly leads to



dangerous mold and bacteria growth. Dryer base measures 11" x 13" and includes a removable clip to fasten a dryer sheet to help freshen the inside of the helmet. Unit connects to a 110V power source and features a cord mounted on/off switch.



Allstar Race Suit

The Allstar Performance Nomex race suit has style, comfort and is affordable! Suit is 1-piece double layer, box quilted and SFI 3.2A/5 certified. Features include: side pockets, an adjustable belt, elastic wrist cuffs, hidden ankle cuffs, elastic back panel, adjustable neck strap, a sturdy waist length zipper and a black nylon storage bag.

ALL99850 Medium **ALL99851** Large

ALL99849 X-Large (Short) **

ALL99852 X-Large **ALL99853** XX-Large

ALL99862* ... Custom Size*

* Completion of a

Allstar Custom Racing Suit Order Form Required

Custom Racing Suits Available in Red, Blue or Black

** "Short" has 2" shorter arms, legs and torso than standard XL

Radio Boxes

Aluminum radio boxes have a removable padded insert to absorb vibration and measures 5" tall x 3-3/4" wide x 2-1/2" deep.





ALL10441 ALL10443

L10443 ALL10439

Small Box – 5" Tall x 3-3/4" Wide x 2-1/2" Deep ALL10439 Flat Mount ALL10441 1-3/4" Mount ALL10443 1-1/2" Mount

Reducer Bushing 1-3/4" To 1-5/8" ALL10445

Reducer works with most clamp-on style brackets or accessories with 1/4" thick mounts including Allstar radio boxes, drink bottle kits, helmet hooks and universal brackets.

Drink Bottle Kit

Mount the drink bottle within driver's reach for a convenient spot to keep a drink. Great for circle track drivers during pit stops or yellow flags. Lightweight aluminum holder comes with replaceable insulated bottle.

ALL10475..... 1-1/2" **ALL10480**..... 1-3/4"

ALL10445 Reducer Bushing

1-3/4" To 1-5/8

ALL10482 Replacement Bottle





Convex Mirrors

Convex mirrors have a curved face to view a wider area which is ideal for keeping an eye on the competition.

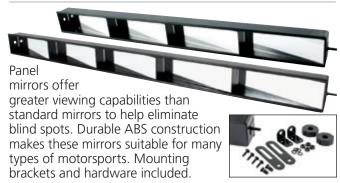
Mirrors have built-in mounting tabs

with 1/4"-20 threaded inserts for convenient mounting. Universal brackets ALL10452-10454 are commonly used when mounting mirrors to round tubing such as roll cages.

ALL76406 14" x 2-1/2" **ALL76407** 17" x 3"

as ion eages.

Panel Mirrors



ALL76404..... Four Panel, 27-3/4" Long **ALL76405**..... Five Panel, 34-3/4" Long

Side View Mirror ALL76409

Aerodynamic 3" diameter mirror quickly and easily mounts to roll cage tubing and includes a 1-1/2" stainless clamp. High strength ABS plastic housing with a scratch resistant polycarbonate lens makes this mirror suitable for a variety of motorsports, but most commonly used on Asphalt Late Models. Adjustable mirror lens pivots in the housing for optimum driver visibility.

Swan Neck Mirrors ALL76400

Beautiful exterior rear view mirrors have a 4" diameter stainless steel head and a 5" long chrome arm. Mounting is blind with one bolt. Sold in pairs.



4" Peep Mirrors

ALL76401

Chrome Peep mirrors have a 4" stainless steel head and can be slipped over the top edge of driver and passenger side doors and secured with Allen head screws. Arm pivots 360° to any position and has a crowned end to lock in the desired position. Includes protective rubber pads. Sold in pairs.





Quick Release Fire Extinguisher Bracket

ALL10510

Bracket keeps fire extinguisher secure and allows quick access by pulling pin. Bracket mounts most 2-1/2 lb. extinguishers with an O.D.

up to 3-1/2" to round tubing with supplied clamps or fastens to a flat panel including trailer or shop walls.

Quick Release NHRA Fire Extinguisher Brackets

NHRA approved bracket keeps fire extinguisher secure and allows quick access by pulling pin.
Bracket mounts most 2-1/2 lb. extinguishers to 1-1/2"- 1-3/4" round tubing with supplied 3/4" wide stainless t-bolt bands or fastens to a flat panel.

AL10512...... Bracket For 3" O.D. Extinguisher **AL10513**...... Bracket For 3-3/8" O.D. Extinguisher

Shifter Boot ALL54130

Fire resistant, black, thermal boot helps prevent fire from entering driver compartment. Boot is 7" tall with Velcro strap closure at top. Base is 6" x 7". Used by many top Cup, xfinity, Truck, CRA and Late Model teams.

Sprint Drag Link Tether

ALL10252

Keeps drag link tethered to the chassis if it becomes disconnected. Tethering of drag link is required by most sanctioning bodies. 24" L x 1" W, woven nylon.





Paulie Colagiovanni

Torque Tube Belt

ALL10181

Universal strap keeps

torque tube stabilized and centered in case of coupler or tube failure. Black, 3" wide belt fits all torque tube and chassis combinations.

Torque Ball Safety Blanket

ALL55220

AL10513

Fire resistant safety blanket designed by Jason Meyers Racing protects drivers legs and feet in the event of a U-joint failure. Ballistic nylon covered blanket weighs just 1-1/2 lbs.

and has quick release adjustable straps that allow blanket to be removed easily for servicing torque ball and U-joint. Blanket includes two mounting brackets, mounting studs, nuts and installation instructions.

Replacement Parts

ALL55224 3/8" Mounting Stud Kit ALL55226 Mounting Tabs, 1-Pair

Engine Diaper

Engine diaper will help contain engine oil and fragments if an engine failure occurs. Increase

safety and reduce the chance of control loss due to debris on the

racing surface. Diaper wraps around oil pan and secures to header bolts. Diaper is NHRA approved but is not designed for vehicles that require SFI approved diapers. Diaper features a sewn-in, non-replaceable oil absorbent pad and is 23" long x 12-1/2" high x 12" wide.

Replacement Parts

ALL99043 Replacement Tabs, 4-Pack ALL99347 Replacement Buckle, 1 Set ALL69013 Engine Diaper Pad, 22" x 30"

Transmission Blanket ALL69010



Contains transmission explosions on high horsepower race cars with stock firewall/floor pan or where a transmission shield isn't practical. NHRA and IHRA approved blanket measures 12" x 47" and meets SFI 4.1 specifications. Includes straps to secure it to most transmissions.



Radiator ALL30028

Aluminum radiator with furnace brazed tanks provides superior cooling in sprint applications. Features machined filler neck, 1-1/2" RH bottom outlet and (4) female top outlet ports for use with -10AN O-ring fittings. Radiator uses a smaller diameter cap (not included) such as ALL30124 or ALL30125. 20" wide x 22" tall x 2" thick. 9.7 lbs.

Cross Flow Radiator (Chassis Mount)

ALL30030

Aluminum radiator with a unique black thermal coating provides superior cooling! Built-in mounting brackets enable the radiator to be quick-turn fastened directly to frame tabs. Radiator with -10AN O-Ring inlets and 1-1/2" outlet is 20-1/2" wide x 18-1/2" tall (including outlet neck) x 2-3/8" thick core. Recommended radiator cap is ALL30126 (28-32 lbs.) sold separately. Approximate weight, 8.5 lbs.

Wall Mount Radiator Holder Kit ALL12216

Brackets fasten to trailer wall and hold radiator safely in place during transport to avoid damage. Kit includes two 29" long aluminum brackets with adjustment holes at 2" increments and arms to fit radiator cores up to 2-1/4" wide. Adjustable arms are slotted for quick adjustment with included thumbscrew knobs to fit a variety of radiator heights.

Radiator Air Scoop For Sprint Car

Scoop fastens around a tube or the front crossmember of most chassis to maximize airflow through the radiator, increase cooling efficiency and at the same time, create downforce. Black plastic scoop is a universal design that will fit a variety of cars and the aluminum scoop is designed for most raised rail cars. Scoop is commonly fastened to the chassis with quick turn fasteners.

ALL23224 Plastic 22" x 11" **ALL23225** Aluminum 22" x 13"

Flat Front Air Box ALL23226

Box fits most sprint cars with 1" raised rail and is fabricated from .080" aluminum. Box measures 9-3/4" left side to 10-3/4" right side, with a total weight of 2.127 lbs.



Radiator Honeycomb

ALL30158

Honeycomb screen mounts to front of radiator to protect fins/core from rocks and debris.
Secure directly to radiator using



ALL30085 mounting kit, sold separately. 19" x 26" x 1/2" thick.

Sprint Car Radiator Rock Screen ALL30163

Aluminum rock screen helps to protect radiators from heavy rocks and mud. Mounting tabs are integrated into the frame for quick



and easy installation to a front air box. Measures 20-1/2" wide x 12" tall and weighs just under 1 lb. Quick turn springs are included.

Aluminum Sprint Motor Plates



Front motor plates for SB Chevy are offered in one- and two-piece designs. One-piece versions mount using the lower front mounting holes. Two-piece sets use the lower front mount holes and the water pump mounting



holes. All plates have 19-1/2" center-to-center chassis mounting holes. ALL38128 and ALL38145 plates come with bushings to allow for engine flex and help with weight transfer.

Part No.	Description	Finish	Thickness
ALL38118	1-Piece Solid Plate	Plain	3/8"
ALL38119	1-Piece Solid Plate	Black	3/8"
ALL38128	1-Piece Plate With Bushings*	Black	3/8"
ALL38145	2-Piece Plate With Bushings [†]	Black	3/8"
ALL38130	Universal Mount	Plain	1/4"

*Has built-in mount for Saldana tank mount bracket OTMB-1. †Designed to work with ALL36092 and ALL36093 tank mounts.

Sprint Engine Cradle ALL10159

Cradle bolts to most stock type and aftermarket SB Chevy blocks, including narrow pattern lightweight and standard bell housing



bolt patterns. Slotted front mounts accept most frame width engine mounts. Provisions for standard wheel kits are positioned to support complete engines with attached radiators.



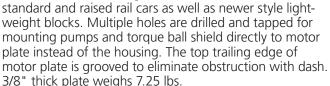
Bellhousing Dowel Pins

Steel dowel pins are approximately 1/2" longer than stock pins and are required when running an engine mid-plate, rear motor mounts or an aftermarket bellhousing. These extended⁸¹⁵² length pins also help with alignment when installing an engine. Pins fit most GM blocks and are sold in pairs.

ALL38150 Solid Pins ALL38152 Hollow Pins

Sprint Rear Motor Plate ALL38126

CNC-machined aluminum rear motor plate fits standard and raised cam engines,



Torque Ball Safety Blanket ALL55220

Fire resistant safety blanket designed by Jason Meyers Racing protects drivers legs and feet in the event of a U-joint failure. Ballistic nylon covered blanket weighs just 1-1/2 lbs. and has quick release adjustable straps

and has quick release adjustable straps that allow blanket to be removed easily for servicing torque ball and U-joint. Blanket includes two mounting brackets, mounting studs, nuts and installation instructions.

Replacement Parts

ALL55224 3/8" Mounting Stud Kit ALL55226 Mounting Tabs, 1-Pair

Torque Tube Belt ALL10181

Universal strap keeps torque tube stabilized and centered in case of coupler



or tube failure. Black, 3" wide belt fits all torque tube and chassis combinations.



Rico Abreu

Positive Cam Lock Shifter

ALL54135

CNC-machined billet aluminum shifter clamps to the frame on driver's right. Designed for use with live axle shifter quick change. Shifter includes all steel hardware, heavy duty cable, and quick release end.

Replacement Part ALL54142 43" Long Cable

SB Chevy Gear Drive Assembly

Aluminum gear drive provides accurate cam timing and the ability to adjust valve timing without removing the oil pan. Aluminum frame features a built-in front oil pan gasket retainer and an idler gear cradle for



accurate cam timing throughout the RPM range. Gear drive are complete with cam, crankshaft and idler gears, needle bearing thrust kits, offset degree bushing kit, extralong dowel pins and installation instructions. Gear drives are commonly used with ALL90080 and ALL90081 Billet Timing Covers or may be used with most stock-type covers such as the ALL90010 with slight modification.

ALL90000..... Standard Cam Gear Drive ALL90100..... Raised Cam Gear Drive (+.391")

Replacement Parts

ALL90001 .. Cam Gear ALL90002 .. Crank Gear ALL90003 .. Idler Gear **ALL90004**.. Cam Plate Shims, 10-Pk. **ALL90005**.. Cam Degree Bushing Set **ALL90007**.. Thrust Washer Set

Billet Timing Covers

Machined billet aluminum timing cover is lightweight, durable and weighs over 1 lb. less than cast aluminum covers. Fits major brand oil pumps. Mounting hardware included.

ALL90080..... Standard Cam ALL90081..... Raised Cam

Aluminum Cam Seal Plates

Aluminum cam seal plate provides a reliable seal and tight fit.



Part No.	Size	Color	Application
ALL90085	2.103"	Black	GM Small Block
ALL90086	2.253"	Gold	Rodeck Block w/1.875 Roller Cam Bearing
ALL90087	2.310"	Blue	Most Blocks w/50mm Roller Cam Bearing
ALL90088	2.382"	Silver	Dart Small Block, Aluminum
ALL90089	_	_	Replacement Cam Plate Seal



ALL76422

Sprint Car Dry Sump Tank Mounting Brackets

Mounting brackets are designed to mount 6" diameter tanks to the left front corner of standard small block Chevy engines. Commonly mounted with ALL38145 sprint motor plate, the upper

bracket utilizes the water pump mounting holes and the lower bracket fastens to the early front engine mount mounting hole.

ALL36092 Upper Tank Mount ALL36093 Lower Tank Mount

Heating Pads

High temperature silicone heating pads

externally preheat oil in wet sump oil pans, dry sump tanks and automatic transmission pans reducing overall warm up time and improving lubrication during initial start up. 3" cord, 120-volt operation.

*ALLSTAR

ALL76420 2"x15", Self Adhesive Pad, 200W **ALL76422** 5"x7", Self Adhesive Pad, 375W

ALL76424 6"x12", Velcro Strapped Pad For 6" O.D. Tanks, 435W **WARNING!** Do not plug heater in without being installed

WARNING! Do not plug heater in without being installed on tank or metallic surface to absorb heat. Element heats up quickly and damage will result.

Immersion Heaters

Immersion style heater preheats oil in wet sump oil pan or dry sump tanks to reduce overall warm up time and improve lubrication during initial start up. 5/8" diameter stainless steel sleeve inserts into pan or tank and secures with a welded on 1/2"NPT brass screw-in fitting. 120-volt operation.

ALL76415 4-3/4" Long Heater Element w/3' Long Cord, 400 W ALL76416 7-1/2" Long Heater Element w/12" Long Cord, 250 W WARNING! Do not plug heater in without being installed in tank and submersed in liquid, element heats up quickly and damage will result.



Corbin Gurley

Sprint Car Wash Plug Set

Aluminum plugs have O-rings for a watertight seal and will keep dirt out of injectors while cleaning sprint car. 4-piece set comes with a nylon storage pouch.



		ALL	26072
Part No.	Size	Wash Plug Dia.	Stack Dia.
Kinsler			
ALL26072	2-1/4"	2.328"	2.335"
ALL26073	2-11/16"	2.762"	2.790"
ALL26074	2-3/4"	2.848"	2.875"
ALL26075	2-13/16"	2.921"	2.950"
ALL26076	2.90"	2.973"	3.00"
Engler			
ALL26033	2-1/2"	2.632"	2.650"
ALL26035	2-13/16"	2.885"	2.905"
ALL26036	2.90"	2.973"	3.00"
ALL26038	3"	3.073"	3.10"
Hilborn			
ALL26032	2-7/16"	2.483"	2.50"

Compact Electric Fuel Pump

ALL40320

High flow, low pressure electric fuel pump equipped with a 5/16" inlet/outlet. The pump flows 18 gph at 4.0 psi, 5.5 psi maximum. Includes a rubber padded mounting bracket and two heavy duty hose clamps. Rated 12V/5 amps. Overall length is 5-1/2" x 1-1/2" wide.

Related Component

ALL40322..... 2-Piece Mounting Bracket for 1-1/8" Tubing)

Fuel Pressure Gauge

ALL40330

Fuel pressure indicator gauge allows preadjustment of the high speed secondary and main valve opening pressures using a compressed air source. Gauge can be mounted directly to the wall or tool

box. 4-1/2" diameter dial has a 0-160 PSI range.

Down Nozzle Filter with Breather Ring ALL40325

Filters allow excess fuel to evacuate the injection lines once engine is shut down to help prevent fuel from entering the cylinders. Low profile filter design reduces the chance of damage. Package of 8.

Nozzle Plugs ALL40327

Nozzle plugs take the place of the fuel nozzles when only running one set of injectors. Plugs feature 1/2"-20 threads and include a sealing o-ring. Package of 8.



Inline Fuel Filter Without Element

ALL40246

Black anodized, high

flow inline filter has -12AN ends. Choose correct bracket and mount to chassis tubing along fuel line. Overall length is 12" and outside diameter is 2". Filter flows enough fuel for any race car. Filter element sold separately.

ALLSTAR

Related Part

ALL40222 Stainless Element (63 Micron)

Filter Fact: Filter element must be installed with the closed end and the spring toward the INLET end of housing. The open end faces the OUTLET.

Fuel Filter Brackets

Brackets mount Allstar inline aluminum fuel filters to round tubing and flat surfaces. Flush mount bracket fastens to flat panels like a frame rail or ALL40235 ALL40229 firewall. A locking set screw holds filter in place. Sold each.

ALL40229..... Fits 1-1/4" Tubing **ALL40227**..... Fits 1-3/8" Tubing **ALL40235**..... Flush Mount

Adjustable Fuel Cell Mounts ALL55112

Slotted mounts replace fixed weld-on brackets and clamp directly to 1-3/8" cross tube. Mounts have 1-1/4" long slots, allowing adjustment often needed to reach insert locations of flexed, ever

changing fuel cell shapes and can be rotated for easy fuel cell mounting. Machined aluminum, black anodized mounts weigh .35 lbs. each. Package of 2.

Titanium Fastener Kit For Fuel Tank Top Plate ALL17008

Kit includes twelve 1/4"-28 x 7/8" button style socket head fasteners to replace the standard bolts securing the top plate to the bladder on most Fuel Safe and ATL sprint fuel cells. Kit weighs less than 45 grams.

Body Reinforcing Plates

Plates help protect fiberglass and aluminum panels from cracking when using 7/16" quick turn fasteners. Stainless steel plates are precision stamped with a strengthening border, attach with 1/8" rivets and measure 2" wide x 1" tall.

ALL18985	. Clear Finish, 10-Pack
ALL18985-50	. Clear Finish, 50-Pack
ALL18986	. Black Finish, 10-Pack
ALL18986-50	. Black Finish, 50-Pack

Coated Braided Steel Lines

Black coated braided steel lines have black aluminum ends. Choose #2 or #3

black aluminum ends. Choose #2 or #3 line in straight/ straight or straight/90° configurations. Lengths stated are overall, end-to-end.

Length	#2 Line Two -3 Straight	#3 Line	#3 Line -3 90° And -3 Straight
6"	ALL48385	ALL48387	ALL48413
9"	ALL48386	ALL48388	ALL48414
12"	ALL48371	ALL48361	ALL48415
15"	ALL48372	ALL48362	ALL48416
18"	ALL48373	ALL48363	ALL48417
21"	ALL48374	ALL48364	ALL48418
24"	ALL48375	ALL48365	ALL48419
30"	ALL48376	ALL48366	ALL48420
36"	ALL48378	ALL48368	ALL48422
48"	ALL48379	ALL48369	ALL48423
60"	ALL48380	ALL48370	ALL48424
73"	ALL48383	ALL48382	ALL48425



Justin Grant

Quick Disconnect Couplings

2-piece couplings allow lines

to be separated without loss of fluid or requiring bleeding. Commonly used on brake systems when changing front or rear axle assembly, hydraulic wing cylinders, a hydraulic clutch system using a hydraulic throw out bearing or when servicing a transmission with an internal hydraulic clutch.

ALL50215 Steel Coupling With 1/8"NPT Female Threads ALL50212 Alum. Coupling With -3AN Male Threads ALL50213 Alum. Coupling With -4AN Male Threads ALL50209 Premium Coupling Fitting With -3AN Male Threads



Adjustable Nose Wing Posts

Clamp-on style angled aluminum mounts fasten around 1-1/2" torsion bar tubes, providing adjustability to front wing posts.



Part No.	Description	Material
ALL55100	Aero Post LH	Steel
ALL55101	Aero Post RH	Steel
ALL55106	Post Straight, 13" Long	Aluminum
ALL55102	Mount For ALL55100 Aero Post LH	Aluminum
ALL55103	Mount For ALL 55101 Aero Post RH	Aluminum
ALL55107	Mount For ALL55106 Post	Aluminum

Fixed Nose Wing Posts

Fixed posts have a 1" O.D. to fit into pinch clamp spuds welded to torsion bar tubes on most chassis. Bent tubes are angled forward to mount the front wing forward, adding increased down force.



ALL55105 ALL55106 ALL55125 ALL55126

Part No.	Description	Material
ALL55108	Bent, Aero With Round Tube	Steel
ALL55105	Bent	Aluminum
ALL55125	Bent	Titanium
ALL55109	Straight, Aero With Round Tube	Steel
ALL55106	Straight	Aluminum
ALL55126	Straight	Titanium
ALL55110	LH Sideboard Mount	Stainless Steel
ALL55111	RH Sideboard Mount	Stainless Steel

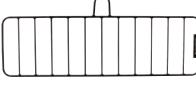
Nose Wing Rear Strap

4130 chrome moly tubular strap mounts from the shock tower to the nose wing side board and will not disrupt air flow. Non-adjustable strap measures 10-3/4" center-to-center with a 5" offset. Sold each.

ALL55115..... Plated **ALL55116**..... Black

Rock Screens

Steel screen mounts to chassis, providing driver added protection from rocks and



debris. Black powder coated screen is 7-1/2" tall with 2" wide slots. Approximately 1.60 lbs.

ALL30165 Sprint Car, 25" Long ALL30166 Mini Sprint, 23-3/4" Long

Sprint Stacked Front Bumper

ALL22300

Stacked front bumper for improved front end protection is precision bent from steel or aluminum tubing, 1" O.D. steel tubing, 6" tall x 8" long overall x 19-1/4" wide on center. Weighs less than 4 lbs.

Titanium Bolt Kit For Nerf Bars And Bumpers ALL17016

Kit includes twelve 10-32 x 1-1/2" bolts with nylon locking half nuts. Kit includes enough fasteners for bumpers and side nerf bars. Kit weighs less than 50 grams.

Mud-X Cleaner ALL78232

Cleans and shines plastic, polycarbonate, chrome, fiberglass, paint, vinyl and leather and leaves an invisible coating that protects surfaces and repels dirt, dust, fingerprints, smudges and bugs. Spray it on and wipe it off. Excellent anti-fog coating for helmet shields. 14 oz. can.

Mud-X Concentrate

ALL78230

Mix concentrate with up to ten guarts of water to produce a coating that prevents mud, dirt, oil, rubber and exhaust residue from sticking to body panels. Safe for metal, plastic, rubber, and painted surfaces. One quart container.

Pressurized Sprayers

Sprayers are great for applying bulk cleaners, degreasers, solvents, penetrating oils and other lubricants. Sprayer has a capacity of 32 ounces and includes a versatile nozzle adjustable from mist to a fine stream.

ALL10516..... Black ALL10518..... Chrome

Tool Tray ALL14170

Tool tray measures 12" x 18" x 3", with hooks on one side to fasten to race car nose or sprint/midget





ALL55130

ALI 55132

ALL55131

ALL55133



Nose Wing Wall Mount Brackets

ALL12214

Brackets attach to the side of trailer wall to hold a spare sprint car front nose wing safely in place. Powder

coated aluminum brackets feature slotted arms that are fully adjustable to accommodate a variety of nose wing shapes and sizes. Sold in pairs





with retention straps to keep wing secure.

Wing Caps



Prevent rock and debris from damaging the leading edge of many popular sprint car wings with a protective cap.

ALL23220 Top Wing Cap, 60" Long, High Impact Plastic ALL23222 Front Wing Cap, 36" Long, High Impact Plastic

ALL23221 Top Wing, 60" Long, Carbon Fiber ALL23223 Front Wing, 36" Long, Carbon Fiber

Manual Wing Adjuster ALL48004



Manual wing adjuster is for sprint car top wings when rules do not permit the use of hydraulic cylinders. Aluminum slider includes 3/8"-24 steel rod ends and is adjustable from 20" to 32" center-to-center in 1" increments with included 1/4" locking pin. Weighs less than 1 lb.

Hydraulic Wing Cylinders



Strong hydraulic wing cylinders have an aluminum body which houses a steel piston and pushrod assembly. Available in 10" and 12" length.

ALL48000..... 10" ALL48002..... 12"

Titanium Studs For Wing Cylinders

Single stud used to mount the wing cylinder to the chassis or wing tree. Stud has 3/8"-24 threads for mounting most cylinders. Mounting nuts not included. Sold each.

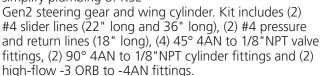


ALL17036..... 5/16"-24 x 3/8"-24 x 1.640" Stud ALL17038...... 3/8"-24 x 3/8"-24 x 1.600" Stud

Sprint Wing Line Kit

ALL48006

Kit includes lightweight, coated stainless steel braided lines and aluminum fittings to help simplify plumbing of KSE



Top Wing Trees

Wing trees have an "X" design for lateral and horizontal strength. Available in 16" and 18" tall versions, each tree is adjustable and will extend up to 6" with adjustment holes located at 1" increments. 16" trees are ideal for X wedge cars to keep the back of the top wing lower while providing optimal top wing tilt at high speed tracks. 4130 chrome moly 3/4" x .060" tube construction. Wing trees are 26" wide at the top

and have a min/max bottom width of 25-3/4" to 26-1/2".

Adjuster pins not included.

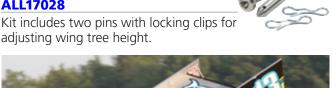
Height	Finish
16" (Extends To 22")	Black
16" (Extends To 22")	Plated
18" (Extends To 24")	Black
18" (Extends To 24")	Plated
	16" (Extends To 22") 16" (Extends To 22") 18" (Extends To 24")

Related Parts

ALL17028...... Titanium Adjuster Pins, (1-Pair) ALL55134 Top Wing Tree Slider, Black ALL55135 Top Wing Tree Slider, Plated

Titanium Top Wing Pin Kit ALL17028

adjusting wing tree height.





Justin Peck



Tel-Tac Mount ALL81332

Aluminum mount accepts Tel-Tac digital tachometers and recesses into a dash for clean, finished look. Mount attaches to backside of dash with guick turn fasteners (buttons sold separately) for simple tachometer removal and installation.

MSD/FAST Ignition Box Mount ALL81330

Box mount provides a quick release method for replacing MSD or FAST ignition boxes with 7-1/2" x 3-1/2" or 4-1/8" x 6-1/2" center to center mounting dimensions. Kit includes aluminum box mount, (4) quick turn fasteners, springs and 1/8" aluminum rivets.

Heel Riser

Aluminum heel risers are pre-drilled for easy mounting and include a non-skid pad. 4-1/2" wide.

ALL54090 1" Tall Riser ALL54091 1-1/2 " Tall Riser

Heel Riser Rest ALL54092

Aluminum bracket is 1" tall and rivets to heel risers to help keep foot in place on the riser.



Throttle Pedal Assembly ALL54106

Rugged aluminum pedal may be mounted to the floor pan or lower frame rail for smooth, safe throttle control. Includes return spring bracket and fasteners.



Sprint Car Throttle Pedals



Pedals fit most sprint chassis with pivot spud welded on frame rail.

ALL54094..... Titanium

ALL54095..... 4130 Chrome Moly

Throttle Bell Cranks

Designed for Sprint car applications, each bell crank is fitted with a pressed .250" I.D. bearing for smooth throttle operation and has ALL54150 optional locations for connecting push rods of various lengths. Typically two are required to complete an application. Option holes on each crank are .188" and

ALL54150 Arms Set 75° Apart, 35 Grams ALL54152 Arms Set 70° Apart, 40 Grams

Ouick Release Throttle Cable Ends

spaced 3/8" apart.

Ouick release ends are used when a throttle connection needs to be removed and installed often. Steel housing has a spring loaded release to keep housing secure to pivot ball.

ALL54147 #10-32 With #10-32 And 1/4"-28 Studs ALL54149 1/4"-28 With 1/4"-28 Stud

Chrome Moly Brake Pedal ALL41033

Lightweight sprint car brake pedal is fabricated from 1" O.D. x .040" 4130 chrome moly tubing then black powder coated. Pedals provide optimal feel due to a knurled no slip, extra grip foot rest. Universal fit pedal works with most sprint car raised rail chassis. 1-1/2" heel block is recommended for proper heel to pedal spacing.

Titanium Brake Pedals

High strength titanium brake pedal is manufactured from 1" diameter tubing. Knurled pattern on 5" wide pedal helps keep foot in place. Approximately .55 lbs.

ALL41031 Standard Rail, 17" Long Overall ALL41032 Raised Rail, 16" Long Overall

Left Front Caliper Mount

Machined aluminum mount keeps the caliper true and straight for maximum braking power. Bolts included.

ALL55070 Mount For 10-7/8" Rotor, Plain ALL55071 Mount For 10-7/8" Rotor, Black ALL55072 Mount For 10-1/8" Rotor, Plain ALL55073 Mount For 10-1/8" Rotor, Black



ALI 54152



Sprint Knee Guard

ALL55230

Ultra light aluminum knee guard designed by Jason Meyers Racing works great for protecting knees from banging against half

box steering gears and provides a comfortable leg support when

throttling through corners. Fire retardant, high-impact, dense rubber padding is covered with self-extinguishing cloth for added safety. Guard fastens to the half box mount (not the box) by drilling and bolting or riveting and is held in place with safety wire or a wire tie.

Knee Guard Mount

ALL55232

Aluminum mount with 2" I.D. fastens around KSE sprint steering box tube to help secure most popular knee guards. Sold each.



Pitman Arms

Pitman arms for popular 48-spline boxes are manufactured from 2024 aluminum and feature two drag link mounting points with 1/2"-20 threads. Angle broached arms provide the extra offset needed on today's short steering boxes for header clearance.

ALL55030 Black Angle Broach, 15° ALL55031 Clear Angle Broach, 15°

ALL55032 Black Straight ALL55033 Clear Straight

ALL55030

Drag Link/Tie Rod

1-1/8" sprint car steering rods are made from 4130 chrome moly .065" wall tubing. Rods have 5/8" threads and a tapered threaded end.

Length	Black Powder Coated	Plated
46"	ALL55932-46	ALL55933-46
47"	ALL55932-47	ALL55933-47
48"	ALL55932-48	ALL55933-48
49"	ALL55932-49	ALL55933-49
50"	ALL55932-50	ALL55933-50
51"	ALL55932-51	ALL55933-51

Drag Link Tether ALL10252

Keeps drag link tethered to the chassis if it becomes disconnected. Tethering of drag link is required by most sanctioning bodies. 24" L x 1" W, woven nylon.



Front Axles

Lightweight .095" wall 4130 chrome moly

front axles measure 50" x 2-1/2" with 9° and 12° kingpin angles for excellent driver feel and are precision built for quality and accuracy. Axle king pin bosses are shipped factory reamed for easy installation and also feature

threaded Panhard bar stud and shock mounts. Available in black powder coat or chrome plated.

ALL55170 Black **ALL55171** Chrome

Aluminum Steering Arms







8

Arms are strong and solid for rough tracks and fit 3-1/4" spindles. Combo arm has a 1" lead.

Description	Black Finish	Clear Finish
Steering Arm RH	ALL55062	-
Combo Steering Arm LH, Solid	ALL55060	-
Combo Steering Arm LH	ALL55058	ALL55059

Titanium Steering Stud Kit ALL17026

Kit includes four studs with nylon locking half nuts that thread into steering and pitman arms with 1/2"-20 threads for properly mounting steering links.





Kyle Cummins



Aluminum Steering Box Mounts

Steering mounts are manufactured from 2024 aluminum. Black anodized finished, steering mounts are offered in three versions. Rigid design keeps steering

gear in place.



ALL52114 Mount With Fuel Shut Off For MPD Valves **ALL52115** Mount With Fuel Shut Off For Waterman Valves ALL52116 Long Mount

Half Box Steering Gear Mount

Mount is designed for quick installation and removal of the steering gear box. Three hex cut slots

eliminate the need to remove snap

ring and end cap and allow the steering box to slide easily into place. CNC-machined from 3/8" thick 2024 aluminum for strength, yet only weighs .60 lbs.

ALL52112 Clear **ALL52113** Black

Power Steering Lines

ALL48260 Assembled lines for power steering have -6AN ends and are compatible with high pressure pumps found in today's sprint cars where standard hose and fittings cannot be used. Lines are lightweight yet strong, weighing less than a standard high pressure hose assembly. Plumbing is perfect for connection of KSE steering gear to pump. 13-1/2" long.

ALL48260..... Line With Steel Ends And Protective Wrap ALL48261 Line With Aluminum Ends

Power Steering Supply Line

ALL48262

Gen2 supply line has a 90° -10AN and a straight -10AN aluminum fitting for a precise

fit to the KSE Gen2 steering gear. New style hose is very flexible, and will not collapse under suction. Total overall length including fittings 9".

Weld Bung For Sprint Car Seat Belts

ALL98125

Bung welds into tubing up to 1-3/8" to convert wrap around style seat belts to bolt-in ratchet style belts. Shoulder allows belt to pivot as needed and accepts 3/8" seat belt mounting hardware.

Sprint Aluminum Torsion Arms

Manufactured from 2024 aluminum. Arms are exceptionally strong and will not flex. Available with black or clear anodized finish.



Description	Black Finish	Clear Finish	
Front			
Left	ALL55000	ALL55001	
Left S-Bend*	ALL55002	ALL55003	
Right Clear	ALL55004	ALL55006	
Right Angle Broach	ALL55005	ALL55007	
Rear			
Left	ALL55010	ALL55011	
Right	ALL55012	ALL55013	
XP Left**	ALL55034	ALL55035	
XP Right**	ALL55036	ALL55037	

^{**} For use with XP Birdcages Only

HD Billet Rear Torsion Arms



Heavy duty, billet aluminum arms have a high resistance to twisting, ensuring a straight rear end while eliminating inconsistent spring rates. LR arms are appx. 3.05 lbs. RR arms are appx. 2.90 lbs. Pinch bolt included.

Description	Black	Clear
Left	ALL55014	ALL55015
Right	ALL55016	ALL55017

Titanium Pinch Bolt Kit For Torsion Arms And Pitman Arms ALL17032

Kit includes five bolts to replace standard 3/8"-24 x 1-7/8" hardware found in most torsion and pitman arms. Bolt kit weighs less than 90 grams.





Torsion Arm Stops

Stops are available in 1-3/4" or 2" split and are offered in aluminum, 4340 steel or titanium. Steel stops include a 9/16" bolt and nut. 2024 grade aluminum stops include a grade eight bolt with 5/8"

head and an aluminum jam nut. Titanium stops include a titanium bolt with 5/8" head and an aluminum jam nut.



ALL55020 Aluminum, Black ALL55024 Titanium ALL55028 Steel, Black

2" Split Stops

ALL55022 Aluminum, Black

ALL55025 Titanium

Related Parts

Titanium Torsion Arm Stop Bolts With Nut

ALL55026 7/16"-20 With 5/8" Head ALL55027 7/16"-20 With 9/16" Head

Titanium Torsion Arm Stop Adjuster Bolt Kit ALL17034

Kit includes four 7/16"-20 stop adjuster bolts with 9/16" heads to replace or upgrade standard hardware found in torsion arm stops. Kit weighs less than 80 grams.



Torsion Arm Stop Kit

Kits hold torsion arm and stop in place if pinch bolts loosen or breakage occurs.

ALL10730 Clear **ALL10731.....** Black

Torsion Bar Bushings

Performance tested anti-friction nylon bushings are stepped to minimize binding of the torsion bar. Durable, lightweight material offers increased wearresistance allowing for longer part life, decreased mating component wear and less down time!

ALL55140...... Sprint 1-1/8" I.D. For .095" Wall Tubes, Each ALL55140-10.. Sprint 1-1/8" I.D. For .095" Wall Tubes, 10-Pack

ALL55150 Midget, Each **ALL55150-10**.. Midget, 10-Pack ALL55160 Mini Sprint, Each **ALL55160-10**.. Mini Sprint, 10-Pack

Shock Bump Rubbers

Conical shaped bump rubbers fit on most shock shafts up to 16mm to limit shock travel. Bump rubbers are 2-3/8" tall and have a 2" O.D. base. A letter designation is molded in the bottom to identify compound.

ALL64500 Soft (40 grams) **ALL64501** Medium (50 grams) ALL64502 Hard (55 grams)

Shock Protectors

Shock protectors add extra protection from rocks and debris to your shock body. 11" tall plastic protector simply snaps onto your shock body. May need to be cut to length. Sold each.

ALL64202 2" Standard Body Shocks ALL64203 1-5/8" Small Body Shocks

Ride Height Blocks

Chassis set-up blocks are adjustable in 1/4" increments. A quick release pin holds block at desired height. Bottom surfaces of blocks are contoured to fit steel tubing or any flat surface and have magnets for

holding block to chassis. Short blocks adjust 1.75"-4". Tall blocks adjust 3"-6". Package of 2.

ALL10720 Short **ALL10721**..... Tall



Adapters replace the standard flat pad on Moose style set up blocks and are machined to cradle axle tubes during chassis set-up. Package of 2.

Live Axle Cradle Rollers ALL10723

Adapters replace the standard flat pad on Moose style set up blocks and are machined to cradle axle tubes during chassis set-up. Package of 2.



Steel chassis dollies allow a car or chassis to be moved around the shop easily and safely. Each dolly measures 30" across

the top with high density rubber pads and a single wheel brake to help prevent rolling. Dollies adjust from 13" to 19" high

with a removable 1" block on one side for use on sprint cars with a raised rail chassis. Stands also collapse flat for storage in shop or trailer. Dollies are rated up to 2000 lbs. per set and sold as a pair.







Aluminum Birdcages

Single bearing design birdcages have replaceable components and are fitted with grade 8 hardware.





XP Aluminum Birdcages

Center pull birdcages are one of the most innovative cages. XP cages eliminate bind on the

bearing and reduce drag, allowing for better weight and horsepower transfer. Must be used with XP rear torsion arms.

ALL55038 Left **ALL55039** Right

Related Parts

ALL55034 XP Torsion Arm Left Black ALL55035 XP Torsion Arm Left Clear ALL55036 XP Torsion Arm Right Black ALL55037 XP Torsion Arm Right Clear

Non-Wing Aluminum Birdcages

Non-wing single bearing birdcages have lowered rear arm connection points, replaceable components and are fitted with grade 8 hardware.



XP, Standard And Non-Wing Birdcage Replacement Components

ALL55050 Brake Mount RR Steel

ALL55051 Flag **ALL55052** Spud

ALL72336 28mm Bearing

ALL55054 Spirolox **ALL55055** Arm Bolt **ALL55056** XP Arm Bolt



ALL55051

Birdcage Bearings

Replacement bearings for Allstar birdcages and many other brands.

ALL72336 28mm Wide **ALL72338** 32mm Wide



Runout Checker ALL96440

Fixture provides an easy way to check for bent torque tubes, drive shafts, torsion bars or radius rods and measures 16-1/2" overall.

Rods Ends

Two-piece spherical rod ends have a pivoting steel ball and are sold each.



Bore x Thread	RH Male	LH Male	Strength		
Pro Series Steel (Moly) – Black					
5/8" x 5/8"-18	ALL58060	ALL58070	18,000 Lbs		
Aluminum – Black					
1/2" x 5/8"-18	ALL58089	ALL58099	15,000 Lbs		

Thin OD Jam Nuts

Specialty jam nuts have smaller outside diameters, allowing smaller wrenches to be used when changing radius rod lengths. Package of 4.

Thread Size	Wrench Size	Steel Part No.	Alum. Part No.	Black Alum. Part No.
5/8"-18 RH	3/4"	ALL18292	ALL18296	ALL18286
5/8"-18 LH	3/4"	ALL18293	ALL18297	ALL18287

Steel Radius Rods

7/8" O.D. steel radius rods are .083" wall tubing and have 5/8"-18 threads.

ALL57188 22" ALL57190 23"

Aluminum Radius Rods

1-1/8" diameter aluminum radius rods are built from .156" wall tubing and have 5/8" threads to fit most sprint cars and midgets.

Length	Black Anodized	Polished
18"	ALL56806-18	ALL56807-18
18-1/2"	ALL56806-185	ALL56807-185
19"	ALL56806-19	ALL56807-19
19-1/2"	ALL56806-195	ALL56807-195
20"	ALL56806-20	ALL56807-20
20-1/2"	ALL56806-205	ALL56807-205
21"	ALL56806-21	ALL56807-21
21-1/2"	ALL56806-215	ALL56807-215
22"	ALL56806-22	ALL56807-22
22-1/2"	ALL56806-225	ALL56807-225
23"	ALL56806-23	ALL56807-23
23-1/2"	ALL56806-235	ALL56807-235
24"	ALL56806-24	ALL56807-24
24-1/2"	ALL56806-245	ALL56807-245

Titanium Radius Rod Stud Kit ALL17020

Kit includes six 1/2-20 x 3-1/4" long (2" and 1" UHL) double-sided studs that install into the chassis providing a secure mounting point for radius rods in most chassis. Kit includes black plated steel nylon locking half nuts for securing studs and radius rods to chassis.



Individual Components

ALL17020-1 .. Stud with locking nuts
ALL17048 Black Half Nuts 10pk 1/2"-20



Chrome Moly Jacobs Ladders

Jacobs Ladder is constructed of 4130 chrome moly with aluminum straps. Grade 8 bolts, nyloc nuts, and AN flat washers are included. Approx. 2 lbs.

ALL55080 13-1/4" **ALL55081** 13-5/8" **ALL55082** 14"

ALL55090..... Strap

ALL55084 12-1/4" Adjustable **ALL55085** 13-1/4" Adjustable **ALL55086** 13-5/8" Adjustable

ALL55087..... 14" Adjustable Replacement Part



Titanium Jacobs Ladders

Titanium Jacobs Ladder is completely assembled with aluminum straps, titanium bolts, mechanical lock nuts, and AN flat washers. Titanium ladders are 1/2

lb.+ lighter than 4130 steel ladders and weigh only 1-1/2 lbs.

ALL55077 13-1/4" Small **ALL55078** 13-5/8" Medium

Replacement Part ALL55090 Strap



Protect the rear axle from rock chips and other debris. Real carbon fiber cover is strong yet lightweight and

attaches to all Jacobs Ladders with existing bolt or pin (not included).

ALL55091 3/8" **ALL55092** 1/2"



Jacobs Ladder Pin Kits

Pin kits offer a quick option for changing out a Jacobs Ladder. Kits include two 3/8" x 3-3/4" long strap pins, one 3/8" or 1/2" x 1-1/2" long pin for birdcage rod end, 3 clips and two springs that help keep the ladder free.

ALL55093 3/8" Steel **ALL55095** 3/8" Titanium **ALL55094*** ... 1/2" Steel **ALL55096*** ... 1/2" Titanium

Replacement Parts ALL55097 3/8" Clip ALL55098 1/2" Clip ALL55099 Spring

*Used with Allstar Jacobs Ladders

Jacobs Ladder Installation Kit

ALL17012

Installation kit includes a titanium pin kit and strap mounting hardware for quickly changing out a Jacobs Ladder. A 1/2" birdcage rod end pin

for use with most popular Jacobs Ladders is also included.

Titanium Fastener Kit For Bead Lock ALL17000

Kit includes 16 pieces of 5/16"-18 x 1" long bolts to reduce rotating weight over standard fasteners. These fasteners work with most beadlock wheels and weigh a total of 114 grams.

Note: Kit will not work with Sander Engineering beadlock wheels

Titanium Fastener Kit For Front Hub ALL17004

Kit includes five 3/8"-16 x 1-1/4" smooth head fasteners with a built-in hex for securing into hub and five shoulder nuts. Fasteners weigh a total of 90 grams.

Titanium Fastener Kit For Fuel Pump

Kit includes three 1/4"-20 x 1/2" mounting fasteners and one 1/4"-20 x 1" long pinch bolt with an extended head for easy adjustments. Fastener kit fits most Waterman or Kinsler style pumps and weighs less than 15 grams.

Titanium Fastener Kit For Fuel Tank Top Plate ALL17008

Kit includes twelve 1/4"-28 x 7/8" button style socket head fasteners to replace the standard bolts securing the top plate to the bladder on most Fuel Safe and ATL sprint fuel cells. Kit weighs less than 45 grams.

Titanium Stud Kit For Headers ALL17010

Kit includes fourteen studs with 3/8"-24 thread on one end, 3/8"-16 thread on the opposite end and 12-point steel shoulder nuts to work with most headers. Overall stud length is appx. 1-1/4". Kit weighs a total of 185 grams.

Titanium Fastener Kit For Nerf Bars And Bumpers ALL17016







Titanium Shock Stud Kit For Frame Boss And Spuds

Shock stud kits include four studs and nylon locking half nuts to mount shock to chassis or front axle. Studs have 1/2"-20 threads that thread directly into pre-threaded bungs.

ALL17022...... Stud Kit For 1/2"-20 Threaded Bungs ALL17022-1.... Stud w/Nut (Single) For 1/2"-20 Threaded Bung ALL17048...... Black Half Nuts 1/2"-20, 10-Pack

Titanium Shock Studs For Rear Torsion Arms ALL17024

Shock stud kits include two studs with large support cones and four nylon locking half nuts to mount shock to most rear torsion arms. Studs and nuts weigh less than 50 grams.



Titanium Steering Stud Kit ALL17026

Kit includes four studs with nylon locking half nuts that thread into steering and pitman arms with 1/2"-20 threads for properly mounting steering links.



Black Half Nuts ALL17048

Black plated steel 1/2"-20 nylon lock nuts are grade 8 and a lightweight option to keep fasteners in place. Package of 10.



Titanium Pin Kit For Top Wing

ALL17028

Kit includes two pins with locking clips for adjusting wing tree height.



Titanium Studs For Wing Cylinders

Single stud used to mount the wing cylinder to the chassis or wing tree. Stud has 3/8"-24 threads for mounting most cylinders. Mounting nuts not included. Sold each.



ALL17036..... 5/16"-24 x 3/8"-24 x 1.640" Stud **ALL17038**..... 3/8"-24 x 3/8"-24 x 1.600" Stud

Titanium Stud Kit For Torque Tubes

Kit includes six 3/8"-24 x 3/8"-16 studs with 12 point steel nuts to secure torque tube to rear end housing. Kit weighs about 100 grams.



Titanium Pinch Bolt Kit For Torsion Arms And Pitman Arms

ALL17032

Kit includes five bolts to replace standard 3/8"-24 x 1-7/8" hardware found in most torsion and pitman arms. Bolt kit weighs less than 90 grams.

Titanium Bolt Kit For Torsion Arm Stop Adjuster ALL17034

Kit includes four 7/16"-20 stop adjuster bolts with 9/16" heads to replace or upgrade standard hardware found in torsion arm stops. Kit weighs less than 80 grams.



See Page 116 For Additional Titanium Fasteners.

Quick Change Gear Totes



Durable plastic quick change gear tote organizes extra gear sets and keeps them clean. Lid snaps shut to hold gears in place. 8"L x 5"W x 2"H.

Description	Single	10-Pack
QC Gear Tote White	ALL14350	ALL14350-10
QC Gear Tote Black	ALL14351	ALL14351-10
QC Gear Tote Yellow	ALL14352	ALL14352-10
6-Spline (Midget) Gear Set	ALL 14352	ALL 14352-10

Gear Tote Tray

ALL12269

Neatly organize up to 10 quick change gear tote boxes vertically. Tray is 21" long x 5-1/2" deep with a 4" tall front edge, making them perfectly sized for Allstar gear tote boxes.



Quick Change Gear Case ALL14355

Sturdy composite storage case protects and holds up to 8 sets of quick change gears. Case has molded in carrying handles and metal hinges. 5" x 8" x 15-1/2" overall when closed.



ALL72052



Drain Pan ALL40112

Round drain pan has molded-in handles and pour spout. 13-1/2" x 11" x 4", 7 quart capacity.



Aluminum Quick Change Drain Pan ALL14166

Aluminum drain pan is handy when changing quick-change gears. Built-in perforated shelf holds gears and allows lube to drain into pan. Pan is 10-1/4" wide, 12" long and 3-3/4" deep.

Drain Pan With Pump ALL14171

Drain pan with built-in pump holds and refills fluids when changing rear end gears. Molded plastic basin and

lid slide together to prevent spilling of fluid. A crank handle is included for hand operation along with a length of straight hex shaft for use with an electric drill. 16" square x 7" tall. 14 quart capacity.

Absorbent Mats

A must for the workshop and trailer. These handy absorbent mats have bonded layers, allowing fluid to spread quickly through material.

ALL12030 15" x 60" Roll (Perforated Every 10") Universal For All Fluid Types (Oil, Coolant, Water)

ALL12031 15" x 60" Roll (Perforated Every 10") For Oil Only ALL12032 100-Pack (15" x 10" Individual Sheets) Universal For All Fluid Types (Oil, Coolant, Water)

ALL12033 100-Pack (15" x 10" Individual Sheets) For Oil Only



Matt Westfall

"Rapid Install" Quick Change Gear Cover

The ultimate quick change gear cover! Speed up gear changes and never again waste time due to cover nuts! Unique design holds nuts directly on the billet 6061-T6 aluminum cover.

ALL72064 Frankland And Winters, Standard Bearing ALL72066 DMI Bulldog Rear End

Quick Change Cover Nuts ALL72060

Aluminum nuts are pre-drilled for safety wire to prevent nuts from working loose and causing leaks.
Nuts have 3/8"-16 threads. Package of 10.

Quick Change Cover Gaskets

ALL72050 Paper **ALL72050-10** Paper, 10-Pack **ALL72052** Thick w/ Steel Core **ALL72052-10** Thick w/ Steel Core, 10pk

Wheel Cover ALL44168

Wheel cover fastens easily with three quick turn fasteners. For use with 15" Weld wheels. Mounting hardware included.



High impact plastic wheel cover features three 1/4"-20 fasteners for secure bolt-on mounting, eliminating the struggle associated with aligning quick turn fasteners during wheel cover installation. Slotted mounting holes allow the same cover to fit a variety of wheels including Weld, Basset

and Aero. Easily convert quick turn style bead lock wheels with quick turn fasteners to a bolt-on style using the appropriate bolt-on conversion kit. Wheel rings are also available to fit non-bead lock wheels for attaching covers.

Sprint Wheel Cover Bolt Kits

Kit includes 5/16"-28 bolts, 1-3/8" spread aluminum insert plates with steel threaded inserts, e-clips to keep bolts on the wheel cover and rivets. Package of 3.

ALL44265..... Stainless Steel ALL44266..... Titanium

ALL99420 Replacement E-Clips, 12-Pack



ALI 44266





Steel tire spoons help

to mount and dismount tires after bead has been broken. Various sizes are available to work with most tire/wheel combinations. Small tool works well to fit inside tire during removal while rounded ends help prevent damage to tire and wheel.

ALL10103...... 24" Straight With Round End ALL10104 16" Curved With Flat End ALL44037..... 16" Curved With Round End ALL44036..... 9" Curved With Round End

Bead Breakers

Convenient tool makes quick work of breaking down even the most stubborn tire beads.

Durable

steel construc-

tion with rubber hand grips. Clamp the hook and inside jaw against the rim, while maintaining slight pressure on the outside handle, then press down on the inside handle, using the outer jaws to separate the tire from the rim, moving around the rim as needed.



ALL44028

ALL44026..... Bead Breaker for 10" Wheels NEW NEW

ALL10105..... Bead Breaker for 15" Wheels

ALL10106 Bead Breaker for 15" Wheels Wide Jaw*
ALL44028..... Bead Breaker w/Adjustable Arm for 10", 13"
and 15" Wheels

*Wide jaw bead breaker works well with soft sidewall tires, helping prevent damage to sidewall.

Wheel Wrench ALL10655

Sprint car wheel wrench features a removable sleeve adapter to fit heavy duty and lightweight axles. Six-point socket fits 3" axle hex nuts. Black powder coated aluminum construction.

Wheel Disconnects

Fit 5/8" dia. valve stem hole for use with center reliefs and Schrader (Fill) valve (ALL44065).

ALL44060..... Plastic, 4-Pack ALL44061..... Plastic, Each ALL44062..... Aluminum, 4-Pack ALL44063..... Aluminum, Each

Replacement Parts

ALL44066..... Sealing Washer, 4-Pack **ALL44067**..... Grommet, 4-Pack







Self-contained groover has built-in temperature controls, eliminating the additional cord and separate control box common with other groovers. Don't let the small package fool you—this groover has the ability to cut small, intricate grooves

yet still handle removing material up to a 1/2". Tapered, razor sharp blade grooves fast and easy. To operate, insert a single blade into groover, set blade height with a tire depth gauge and set the power level. Place the cutting edge against the tire surface and obtain instant heat by simply pulling back on the trigger. Groover features a Hi/Low toggle switch and a temperature control dial in the handle for setting desired heat level. "All-In-One" groover requires "All-In-One" blades; do not use standard groover blades with this groover.

Flat Bottom Blades, 12-Pack		Round Bottom Blades, 12-Pack	
ALL10780	#3 Blades 3/32"	ALL10790	#1 Blades 1/32"
ALL10781	#4 Blades 4/32"	ALL10791	#2 Blades 2/32"
ALL10782	#5 Blades 5/32"	ALL10792	#3 Blades 3/32"
ALL10783	#6 Blades 6/32"	ALL10793	#4 Blades 4/32"
ALL10784	#8 Blades 8/32"	ALL10794	#5 Blades 5/32"
ALL10785	#10 Blades 10/32"	ALL10795	#6 Blades 6/32"
ALL10786	#12 Blades 12/32"	ALL10796	#8 Blades 8/32"
ALL10787	#14 Blades 14/32"	ALL10797	#10 Blades 10/32"
ALL10788	#16 Blades 16/32"	ALL10798	#12 Blades 12/32"

Heated Tire Siper

ALL10266

Sipe tires quickly and effortlessly while maintaining precise control. Siping can greatly improve traction by allowing the tire to reach and maintain optimum temperature. A locking lever and blade clamping screw secures up to 13 blades in the head assembly. Blades can be easily positioned up or down to desired cutting depth. A built in blade rail holds blade strips



are snapped away. Tool heats in 10-15 minutes. 110V plug in operation only.

Replacement Parts

ALL99104 Tension Lever Kit

in place while individual blades

Siping Blades ALL99108

Siping blades are designed to work in ALL10266 Heated

Tire Siper and ALL10540 8-Blade Siping Head. Four strips contain six individual break-away blades that are easily removed or separated using needle nose pliers. Package of 24 blades.



__ ALL48501

ALL48503

ALL48500



SB Chevy Power Steering Kits

Kits include all the major components of a power steering system: power steering pump fitted with a lightweight aluminum pulley, power steering tank, tank mounting bracket, and choice of head or block mounted pump bracket.

ALL48240..... Head Mount Kit ALL48242..... Block Mount Kit

Notes: Additional pulley or bracket shimming may be required on some applications. Head mount bracket may need to be modified to clear some water pumps.

Power Steering Pump With Pulley

Steel Type II style power steering pump with 6" diameter pulley provides smooth, consistent steering. Pump is rated at 3 gallons per minute and produces up to 1300 PSI at a recommended pump RPM range of 1500-6500. Pump features a -6AN pressure fitting and a -10AN return fitting.

ALL48250..... Pump With Pulley **ALL48252***... Pump With Pulley For 1/2" Belt

Replacement Part

ALL48251 Pulley For ALL48250 ALL48253 Pulley For ALL48252 ALL99287 -10AN Return Fitting ALL99288 -6AN Pressure Fitting

*Designed for use with 1/2" wide industrial grade belt used with ALL31094 and ALL31095 1:1 pulleys.

Power Steering Pump With Pulley And Reservoir ALL48245

Aluminum Type II style power steering pump with 6" diameter pulley and integral fluid reservoir provides smooth, consistent steering. Pump is rated at 3 gallons per minute and produces up to 1300 PSI at a recommended pump RPM range of 1500-6500. Pump features a -6AN pressure fitting and a -6AN return fitting

Replacement Parts

ALL48246..... Cap **ALL48247**..... Tank And Clips **ALL48251**..... Pulley For ALL48245

V-Belts

Premium quality V-belts are perfect replacements for worn or cracked belts.

ALL86120 31.5" ALL86123 41" ALL86121 34" ALL86124 42" ALL86122 39" ALL86125 44"

SB Chevy Power Steering Pump Bracket Kits

Power steering bracket kit provides proper installation of the Type II style power steering pump to most SB Chevy applications with a short style water pump. Bracket kit also includes bracket-to-engine and pump-to-bracket mounting hardware. Head mount locates the pump

ware. Head mount locates the pump to the driver's side cylinder head and the block mount locates the pump to the lower driver's side of the block.

ALL48500..... Head Mount Kit ALL48502..... Block Mount Kit

Notes: Additional pulley or bracket shimming may be required on some applications. Head mount bracket may need to be modified to clear some water pumps.

Replacement Parts

ALL48505 Bracket-To-Head Bolt Kit ALL48506 Bracket-To-Block Bolt Kit ALL48507 Pump-To-Bracket Bolt Kit ALL48508 Adjuster T-Nut

Economy SB Chevy Power Steering Pump Bracket Kits

Power steering bracket kit provides proper installation of the Type II style power steering pump to most SB Chevy applications with a short style water pump. Bracket kit also includes bracket-to-engine and pump-to-bracket mounting hardware. Head mount locates the pump to the driver's side cylinder head and the block mount locates the pump to the lower driver's side of the block.

ALL48501..... Head Mount Kit ALL48503..... Block Mount Kit

Replacement Parts

ALL48505..... Bracket-To-Head Bolt Kit ALL48506..... Bracket-To-Block Bolt Kit

Notes: Additional pulley or bracket shimming may be required on some applications. Head mount bracket may need to be modified to clear some water pumps.

Pulley Shim Kits

Use shim kits to properly align pulleys. Water pump shims have dual bolt hole pattern to fit most GM and Ford water pumps. Crank pulley spacers are for small block Chevys. Kits include three shims.



ALLSTO

ALL31064 Water Pump Shims, 1/16", 1/16", 1/8" **ALL31066** Crankshaft Shims, 1/16", 5/64", 1/8"



Firewall Mount Power Steering Tanks

Aluminum tank measures 8" tall overall by 3" wide at the top and features welded-on mounting tabs with holes spaced 4-1/4" apart. Tank features an internal baffle between the -6AN return and the -10AN supply to help prevent cavitation and includes a twist off filler cap.



ALL36136 LH Inlet **ALL36137** RH Inlet

Economy Power Steering TankWith Bracket ALL36130

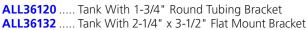
Aluminum tank has no internal baffles and is 8" tall overall by 3" in diameter with a -6AN return fitting on the side and a -10AN fitting on the bottom. A mounting bracket for 1-3/4" round tubing is included.



ALL36122 Round Tube Mounting Bracket

Power Steering Tank With Bracket

Aluminum tank is 8-1/2" tall overall by 3-1/2" in diameter with a -6AN return fitting on the side and a -10AN fitting on the bottom. A baffle in the return fitting prevents foaming and cavitation. A steel bracket for mounting tank is included.



ALL36121 Tank and Cap Only
ALL36124 Replacement Cap Only

ALL36122 Round Tube Mounting Bracket **ALL36125** Flat Mounting Bracket

Power Steering Tank Brackets







ALL36132

Brackets secure 3" or 3-1/2" diameter power steering tanks to round tubing, or flat surfaces such as firewalls. Tanks fasten to brackets with hose clamps or band clamps (not included).

ALL36122 Horizontal Mount (1-3/4" Tubing) **ALL36123*** ... Horizontal Mount (Alum. Angle)

ALL36125 Flat Mount

Power Steering Hose Kits

Kits include hose and fittings to properly install a remote reservoir style power steering pump to most cars. Steering box fittings are sold separately.

Front Mount Kits - O.E. Style Location With Pump Mounted To Front Of Engine

ALL48204 Kit For Stock Type Gear Box (Modified, Street Stock)

ALL48200 Kit For Rack And Pinion Steering

Rear Mount Kits - Pump Mounted To Bell Housing Mounted Dry Sump Pumps, Fuel Pumps, etc.

ALL48201..... Kit For Rack And Pinion **ALL48205**..... Kit For Steering Box

Power Steering Hose

The same quality hose included in



Allstar's power steering hose kits available in a variety of lengths for building custom power steering lines or making repairs. Hose is suitable for most steering applications.

-6AN Power Steering Hose

ALL48270-3	3' Long
ALL48270-6	
ALL48270-10	10' Long
ALL48270-15	15' Long
ALL48270-20	20' Long

-10AN Stainless Hose

ALL48275-3...... 3' Long **ALL48275-6** 6' Long

Power Steering Hose Ends

The same quality hose ends included in Allstar's power steering hose kits for building custom power steering lines or making repairs. Fittings are suitable for most steering applications.



-6AN Hose Ends (Steel)

ALL48271 Straight **ALL48272** 45° **ALL48273** 90°

-10AN Hose Ends (Aluminum)

ALL48276 Straight **ALL48277** 45° **ALL48278** 90° **ALL48279** 120°



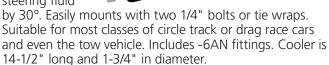
ALL48278

ALL52102

ALL48200

In-Line Oil Cooler

Cool transmission or power steering fluid



ALL52100 Clear **ALL52102** Black



^{*}Bracket may be clamped to round tubing or bolted to the firewall.



Sprint Power Steering Lines



Assembled lines for power steering have -6AN ends and are compatible with high pressure pumps found in today's sprint cars where standard hose and fittings cannot be used. Lines are lightweight yet strong, weighing less than a standard high pressure hose assembly. Plumbing is perfect for connection of KSE steering gear to pump. 13-1/2" long.

ALL48260 Line With Steel Ends And Protective Wrap ALL48261 Line With Aluminum Ends

Sprint Power Steering Supply Line

ALL48262

Gen2 supply line has a 90° -10AN and a straight -10AN aluminum fitting for a precise fit to the KSE Gen2 steering

gear. New style hose is very flexible, and will not collapse under suction. Total overall length including fittings 9".

Power Steering Box Fittings

Allstar fittings convert most power steering boxes ALL48210 ALL48211 ALL48212 ALL48214 and racks to -6AN fitting.



O-Ring Style Fittings

ALL48210* ... -6AN Male To 16mm Fitting With O-Ring

ALL48211 -6AN Male To 14mm Fitting With O-Ring ALL48212* ... -6AN Male To 18mm Fitting With O-Ring ALL48214 -6AN Male To 9/16"-18 Fitting With O-Ring

Non O-Ring Style Fittings

ALL48215 -6AN Male To 5/8"-18 Fitting ALL48217 -6AN Male To 11/16"-18 Fitting

Loading Couplers

Loading coupler is a combination U-joint and a non-locking steering coupler that slips over the splined end of the steering

ALL52306

shaft for easier loading and unloading of cars in enclosed trailers through the use of a remote steering shaft. Coupler has a built-in U-joint that accepts 3/4" tubing.

ALL52306 19-Spline For Allstar/Sweet ALL52307 20-Spline For Woodward



ALL48215 ALL48217

Related Parts

ALL52305 19-Spline End For Allstar/Sweet Disconnect

Steering Wheel **Disconnects**

Disconnects allow easy installation and removal of three bolt style steering wheels, often used to ease the entering and exiting of vehicles. Quick release aluminum steering wheel hub mates to a steel coupler, which is welded

to a standard 3/4" steering shaft.

ALL52302 Hex Style (Pin Type) ALL52300 Spline Style (360° Flange) ALL52304 SFI Spline Style (360° Flange)

Replacement Parts

ATTENTION: Do not mix components with other manufacturer's disconnects!

ALL52303 Hex Coupler for ALL52302 ALL52301 Spline Coupler for ALL52300

ALL52305 Spline Coupler for ALL52304 (2" of Spline Area)



ALL52304

ALL52300

ALL52303 ALL52305

Steering Wheel Extensions

Aluminum steering wheel extensions fit between steering wheel and guick disconnect so the distance between driver and steering wheel can be adjusted. Includes fasteners.

ALL52310 1/2" ALL52312 1" ALL52314 1-1/2" ALL52316 2"



Angled Steering Wheel Adapter ALL52325

Change the angle of your steering wheel! Unique adapter mounts between your steering wheel and disconnect, allowing you to change the angle for driver

comfort. Dual mounting holes allow for specific steering wheel spoke location. Adapter is 1" thick at the widest area and includes fasteners.

- Designed for use in guick steering race cars (late models, modifieds, road race). Not recommended for use with stock ratio steering box, slow steering applications.
- Clearance Double Check: After installation be sure you have sufficient driver and seat belt clearance, as the steering wheel will no longer spin in a single plane (it moves in and out, when spun completely around).

Molded Steering Wheel Pad ALL52322

Molded pad fits flat or dished 3-spoke steering wheels. Velcro straps are permanently secured to pad for quick installation.

Steering Wheel Pad **ALL52320**

Black vinyl covered pad fastens to most three spoke racing steering wheels with three hook/loop straps. 5-3/4" diameter foam pad is 2" thick.



^{*}These are the two most common fittings when O-rings are needed.



Steering Shaft Tubing

Seamless D.O.M. tubing is 3/4" O.D. with .120" wall thickness, making this an excellent choice when building a steering assembly to connect steering wheel to steering box or rack and pinion. ALL52132 oversized rod end is commonly used to support steering shaft. Consult sanctioning rules to verify proper installation

when building a steering assembly.

ALL22190 5' Steering Shaft ALL22191 6' Steering Shaft



"Double D" Steering Shafts

Solid steel shaft has the appearance of two D's stacked back to back when viewed from the end or simply a 3/4" round shaft with flats on opposite sides. Often used with stock type couplers, this shaft can be used in assemblies without welding. Commonly connected to U-joints using a set screw, the shaft should be dimple drilled to help pilot set screws and help prevent the assembly from sliding apart. ALL52132 oversized rod end is commonly used to support steering shaft. Consult sanctioning rules to verify proper installation when building a steering assembly.

ALL52175 24" Shaft ALL52176 30" Shaft ALL52177 36" Shaft ALL52178 60" Shaft ALL52179 72" Shaft



Shaft Collars

Aluminum, 2-piece shaft collars are used on sway bars and steering column assemblies.



Flange Bearing ALL52130

Self-aligning flange bearing has a .757" I.D. and installs in the firewall to accept the steering shaft. Includes locking collar. Bearing allows shaft to angle up to 40°.



Oversize Rod End Kit ALL52132

Mounts to steering column bracket to hold steering shaft in place. Kit includes one rod end and two steel 3/4" RH jam nuts. Rod end is .757" I.D. (.007" oversized) to slide over a 3/4" O.D. shaft.



Steering Shaft Rod End Mounting Tab

Gusseted weld-on tab provides an excellent mounting point for the 3/4" oversized rod end (ALL52132) when building custom steering shaft assemblies. Tab is designed to cradle into round chassis tubing with built-in gussets, adding strength and reducing flex.



Collapsible Steering Shafts



Collapsible shaft is designed to be used in-line near the rack and pinion or steering box, allowing steering shaft compression. For proper installation, shaft should be extended when installed. The heavy wall, 1.140" diameter tubular steel shaft has 3/4"-20 splines on both ends. The durable rubber boot keeps the sliding mechanism free of dirt and debris.

Note: This shaft is NOT designed for directly attaching a steering wheel disconnect.

Couple

U-Joint

ALL52170 Long Assembly 24-1/2", Collapses 7" ALL52171 Short Assembly 13-1/2", Collapses 3" ALL52172 Replacement Rubber Boot

Related Parts Coupler

SWE301-30160 .. 3/4" - 20 x 3/4" Smooth

U-Joints

SWE401-50621 .. 3/4"-20 x 3/4" Smooth

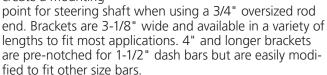
SWE401-51021... 3/4"-20 x 3/4"-48 Sweet Spline

SWE401-51121 ... 3/4"-20 x 13/16"-36 Chevy Power **SWE401-51221** ... 3/4"-20 x 3/4"-36 Chevy Manual

SWE401-51521... 3/4"-20 x 3/4"-30 New-Chevy Power

Steering Column Brackets

Stamped-steel brackets weld to dash bars to create a mounting



ALL52120 2-1/2" Long **ALL52122** 4" Long **ALL52124** 8" Long **ALL52126** 10" Long

Clamp-On Steering Column Bracket ALL52128

Aluminum bracket clamps to 1-3/4" tubing and is 7-1/2" center-to-center. Mounting bolts face the seat, so the driver can easily adjust the column up and down while sitting in the seat. An oversize rod end (sold separately, ALL52132) mounts horizontally through a 3/4" hole, allowing some left to right adjustment without moving the bracket or notching the interior panel.

Steering Quickener Bracket ALL60028

Mounts all popular steering quickeners including AFCO, Coleman and Howe. Bracket has two holes spaced 1-3/4" apart, and may be welded to 1-1/2" or 1-3/4" diameter tubing.





Pitman Arms

Replacement GM pitman arms.







A-Body (Chevelle)

ALL56354 '68-72, Use w/800 Series Power Box

ALL56355 '68-72, Use w/Manual And 605 Small Power Box

G-Body Intermediate Metric (Monte Carlo)

ALL56357 '78-88, Use w/800 Series Power Box

ALL56356 '78-88, Use w/Manual And 605 Small Power Box

Pitman Arm Nut And Lock Washer, 7/8"-14 Thread ALL56358

Idler Arms

OE replacement parts.

		Application
ALL56344	K5143	'68-72 Chevelle, '70-72 Monte Carlo
ALL56345	K6187	1978-88 Monte Carlo
ALL56347	K6186	1970-81 Camaro, 1975-79 Nova

GM Metric Adjustable Idler Arm ALL56341

Adjustable arm for 1978-88 GM Metric G-body cars features a threaded assembly which aids in correcting bump steer problems by lowering the arm up to 3/4" compared to OE style arm. Arm is constructed of forged steel components so there are no plastic parts or springs to wear out like OEM style arms. Not legal in all sanction bodies.



Centerlinks



Centerlinks are brand new and fit GM applications. Mounting hardware included.

Allstar	Moog	Description	Year
		Buick Special, Skylark, Grand Sport	
ALL56310	DS749	Chevrolet Chevelle, El Camino, Monte Carlo	'68-72
		Oldsmobile Cutlass, Hurst, 442	
		Buick Century, Regal	
ALL56311	DS808	Chevrolet Chevelle, El Camino, Monte Carlo	′73-77
		Oldsmobile Cutlass, Hurst, 442	
		Buick Century, Regal, GN, GNX	′78-81
ALL56312	DS909	Chevrolet Malibu, El Camino, Monte Carlo	′78-88
ALL303 12 D3909	D3303	Pontiac Bonneville	'82-86
		Pontiac Grand Prix	′78-87
		Cadillac Fleetwood, Brougham, Deville	′77-84
		Chevrolet Caprice, Impala, Impala SS	′77-96
ALL56313	DS899	Oldsmobile Delta 88	′77-85
		Pontiac Bonneville, Catalina	′77-81
		Pontiac Parisienne	′83-86
ALL56314	D\$829	Chevrolet Camaro (1970-73 With Power Steering, All 1974-79, 1980-81 V8)	′70-81
		Pontiac Firebird And Trans Am (V8)	′80-81

Adjustable Centerlinks



Centerlinks add strength and adjustability. Correct bump steer with specially designed inserts (available separately or in kits). Insert kits include one each of four different offsets. Lower center design adds engine oil pan clearance. OEM frame cross member must be modified.

ALL56330 Centerlink, Metric GM '78-88 ALL56331 Centerlink, Camaro '70-81

Note: some applications may require early style (shorter) Pitman arms.

Replacement Parts

ALL99084..... Stud For ALL56330 Pitman End (Long)
ALL99085..... Stud For ALL56330 Idler End (Short)
ALL99086..... Stud For ALL56331 Pitman End (Long)
ALL99087..... Stud For ALL56331 Idler End (Short)
ALL99088..... Centerlink Shims, 12-Pack (6 each .030"/.060")

Inserts For Adjustable Centerlinks

Adjustable centerlink inserts have tapered or straight-through designs. Tapered inserts have a 1-1/2" per foot taper and are commonly used with stock type inner tie rods, while straight-through design are for use with a 5/8" bolt and rod end.

Description	Tapered Inserts	Straight-Through Inserts
Insert Kit (Centered, 1/8", 1/4" and 3/8")	ALL56334	ALL57334
Centered	ALL56335	ALL57335
1/8" Offset	ALL56336	ALL57336
1/4" Offset	ALL56337	ALL57337
3/8" Offset	ALL56338	ALL57338

Cory Crapser



Tie Rod Ends

OE replacement parts.



Allstar	Moog	Description	Size (Thread And Length)	Application
ALL55900	ES323R	Inner Tie Rod	5/8"-18 RH Thread x 4" Long	1963-82 Corvette, 1963-64 GMC Truck
ALL55901	ES323L	Inner Tie Rod	5/8"-18 LH Thread x 4" Long	1963-82 Corvette, 1963-64 GMC Truck
ALL55902	ES370R	Inner Tie Rod	5/8"-18 RH Thread x 7-1/4" Long	1965-68 Impala, 1965-70 Chevrolet P/U
ALL55903	ES2034RLT	Inner Tie Rod	5/8"-18 LH Thread x 8-1/2" Long	1978-88 Monte Carlo (G-Body)
ALL55920	ES2033RLT	Outer Tie Rod	5/8"-18 RH Thread x 8-1/2" Long	1978-88 Monte Carlo (G-Body)
ALL55921	ES333RL	Outer Tie Rod	5/8"-18 RH Thread x 8-1/2" Long	1964-70 Chevelle
ALL55904	ES681N	Inner Tie Rod	5/8"-18 LH Thread x 9" Long	1968-70 Chevelle/Malibu
ALL55910	ES2020RLT	Inner Tie Rod	11/16"-18 LH Thread x 9" Long	1973-77 Chevelle, 1977-96 Impala
ALL55911	ES442L	Inner Tie Rod	11/16"-18 LH Thread x 9" Long	1975-81 Camaro, Left
ALL55912	ES443L	Inner Tie Rod	11/16"-18 LH Thread x 9" Long	1975-81 Camaro, Right
ALL55922	ES2019RLT	Outer Tie Rod	11/16"-18 RH Thread x 9" Long	1977-96 Impala
ALL55908	ES427R	Outer Tie Rod	11/16"-18 RH Thread x 9" Long	1973-77 Chevelle/Monte Carlo

Steel Tie Rod Tubes

Steel tubes are built from 7/8" O.D., .083"

wall D.O.M tubing and swaged to accept 5/8" rod ends or O.E. style tie rod ends with 5/8-18 threads. Tubes are threaded LH on one end and RH on the other end for easy adjustments.

ALL57160 8"	ALL57172 14"
ALL57162 9"	ALL57173 14-1/2"
ALL57164 10"	ALL57174 15"
ALL57166 11"	ALL57175 15-1/2"
ALL57167 11-1/2"	ALL57176 16"
ALL57168 12"	ALL57178 17"
ALL57169 12-1/2"	ALL57180 18"
ALL57170 13"	ALL57182 19"
ALL57171 13-1/2"	ALL57184 20

See Page 210 And 211 For Additional Steering/Suspension Tubes.

5/8" Bent Steel (Tie Rod Tubes

Bent tie rod tube or adjusting sleeve is commonly used on Modifieds and Stock Cars to provide additional clearance on the right front tie rod link. Bent design tube helps prevent the chassis from hitting steering components when the suspension rolls over onto the right front. Typically used with factory style inner tie rod end and a rod end style outer. Tube is constructed of .160" wall 7/8" O.D. steel tubing with 5/8"-18LH threads on the straight end and 5/8"-18RH threads on the curved end.

ALL57008 10"	ALL57018 15"
ALL57010 11"	ALL57019 15-1/2"
ALL57012 12"	ALL57020 16"
ALL57013 12-1/2"	ALL57021 16-1/2"
ALL57014 13"	ALL57022 17"
ALL57015 13-1/2"	ALL57024 18"
ALL57016 14"	ALL57026 19"
ALL57017 14-1/2'	ALL57028 20"

Dropped Steel Tie Rod Tubes

Dropped Steel tie rod tubes are popular on modifieds and street stocks providing additional clearance on the right front tie rod assembly. Tube is .156" wall, 7/8" OD, with 5/8"-18RH threads located on the inside/ center link end and 5/8"-18LH threads on the outer/spindle end. Length stated is overall length of tube.

ALL57040-10	10"	Tube
ALL57040-11	11"	Tube
ALL57040-15	15"	Tube
ALI 57040-16	16"	Tube

Steel Tie Rod Tubes, With 5/8" RH And 11/16" LH

Swaged D.O.M. steel tube has a 1" O.D. and is commonly used with an O.E. style 11/16"-18 LH inner tie rod end and a 5/8" RH rod end.

ALL57302 9" **ALL57304** 10" **ALL57306** 11" **ALL57308** 12"

Tie Rod Adjusting Sleeves

O.E. style replacement sleeves fit many applications and have LH and RH threads for easily adjusting the toe setting.



Allstar	Moog	Size (Thread And Length)
ALL55930	ES2032S	5/8"-18 x 4-1/2" Long
ALL55931	ES2004S	11/16"-18 x 4-3/4" Long
THE RESERVE TO	Asidonates 3	A Para State of the later of th



Rusty Schlenk



Taper Reamers

Repair or enlarge tapered holes to accept tie rod ends or ball joints. Reamer may be used in a drill with a 1/2" chuck by removing the T-handle.

ALL11170 1-1/2" Per Ft. 7.15° ALL11172 2" Per Ft. 9.56°

Taper Reamer Specifications For Ball Joints

Ball Joint	Taper Specs	Ball Joint	Taper Specs
ALL56204	1-1/2" Per Ft.	ALL56217	1-1/2" Per Ft.
ALL56206	2" Per Ft.	ALL56218	2" Per Ft.
ALL56208	2" Per Ft.	ALL56220	2" Per Ft.
ALL56210	1-1/2" Per Ft.	ALL56280	1-1/2" Per Ft.
ALL56212	2" Per Ft.	ALL56284	1-1/2" Per Ft.
ALL56214	1-1/2" Per Ft.	ALL56286	1-1/2" Per Ft.
ALL56216	1-1/2" Per Ft.	_	_

Inner Tie Rod Stud ALL56278

Stud replaces the stock inner tie rod end, allowing a 5/8" rod end to be used on both ends of the steering link. Inner tie rod stud and rod end combination also provides additional steering clearance compared to O.E. style inner tie rod and crossmember.



ALL56280

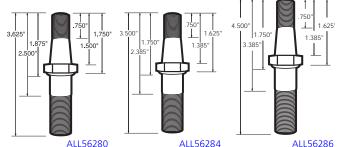
ALL10660

ALL10662

Bump Steer Studs

Studs have 1-1/2" per foot taper and simplify bump steer setting. Attach outer tie rod end to spindle so end can be raised or lowered as needed. Self locking nuts, one .100"spacer and three .300" spacers included. ALL56286 also includes a .500" spacer.





Set Up Plates

Set-up plates are used for squaring and stringing chassis to ensure accurate chassis set-up by eliminating wheel and tire differences. Plates are 1/2" thick and can also be used when setting bump steer or checking axle

tubes for straightness. Sold each.

ALL10660 5x5, 7" x 28" **ALL10662** Wide 5, 12" x 28"

Bump Steer Kit ALL18600

Kit includes a 5/8"-18 x 3" bolt and 4 spacers (.100", .200", .300" and .500").



Bump Steer Spacer Kit ALL18601

Steel spacers have a 5/8" I.D. and are commonly used to space a steering rod end when cor-

recting bump steer. Kit includes 7 spacers, one of each size: .030", .060", .100", .200", .300", .400" and .500".

Individual Spacers (2-Pack)

ALL18602 030"	ALL18606 300"
ALL18603 060"	ALL18607 400"
ALL18604 100"	ALL18608500"
ALL18605 200"	

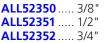
Tie Rod Spacer ALL56288

Spacer corrects bump steer on vehicles that use a rod end as an outer tie rod end. Spacer is used between the spindle arm and the rod end. Steel spacer is 2" tall and has a 5/8" hole.



Rack And Pinion Spacers

Place aluminum spacers between chassis and rack assembly to help achieve proper front end geometry.



Steering Rack Boot Cover

ALL52345

Neoprene cover fits most steering racks and helps

protect against rocks and debris. Hook-and-loop closure makes installation and removal simple.



Toe Plates

Aluminum plates simplify setting of toe-in and toe-out. Plates fit against outside edges of tires. Using two tape measures (sold separately), measure the distance between plates front and rear. The difference in tape readings is the toe setting. Deluxe plates have radiused

edges, slots for narrow and



wide tape measures and are 9" tall x 23" wide to work with vehicles with smaller wheel openings. Standard plates are 1/2" thick, 11" tall x 32" wide and work well for vehicles with larger wheels and wheel openings. Set of two plates.

ALL10117 Standard ALL10119 Deluxe



ALL10117



Mustang II Spindles

Mustang II/Pinto spindles are direct replacements for stock O.E. spindles featuring the stock 10° pin inclination and upper and lower ball joint tapers. Spindles accept Granada or Hybrid style rotors with corresponding caliper brackets, calipers and brake pads. IMCA approved spindles features the official IMCA stamp of approval cast into the spindle.

Stock Height Spindles

ALL56307 Spindles, Pair ALL56308 Spindle LH ALL56309 Spindle RH

ALL56303 Spindle LH IMCA Approved **ALL56304**..... Spindle RH IMCA Approved

2" Dropped Spindles

ALL56305 Spindles, Pair

Related Components

ALL42110 LH Caliper Bracket for Granada Rotor **ALL42111** RH Caliper Bracket for Granada Rotor **ALL42118** LH Caliper Bracket for Hybrid Rotor ALL42119 RH Caliper Bracket for Hybrid Rotor

ALL42084..... LH GM Metric Caliper ALL42083 RH GM Metric Caliper

ALL72308 Granada Master Bearing and Seal Kit **ALL72309** Hybrid Master Bearing and Seal Kit

Mustang II Spindles With Reamed Lower Ball Joint Hole

Mustang II/Pinto spindles are stock appearing and available with 10° (OE) or 8° pin inclination and 1-1/2" or 2" per foot lower ball joint taper. Spindles accept Granada or Hybrid style rotors with corresponding caliper brackets, calipers and brake pads.

10° (OE) Pin Inclination

Part No.		Lower B/J Taper	Lower B/J Major Dia.	Common Lower B/J	B/J
ALL55996	LH	1-1/2"	.830"	ALL56216 (K727)	Screw-In
ALL55997	RH	1-1/2"	.830"	ALL56216 (K727)	Screw-In
ALL55998	LH	2"	.830"	ALL56212 (K6117)	Press-In
ALL55999	RH	2"	.830"	ALL56212 (K6117)	Press-In

8° Pin Inclination

Part No.		Lower B/J Taper	Lower B/J Major Dia.	Common Lower B/J	B/J
ALL55990	LH	1-1/2"	.710"	_	-
ALL55991	RH	1-1/2"	.710"	_	-
ALL55994	LH	1-1/2"	.830"	ALL56216 (K727)	Screw-In
ALL55995	RH	1-1/2"	.830"	ALL56216 (K727)	Screw-In
ALL55992	LH	2"	.830"	ALL56212 (K6117)	Press-In
ALL55993	RH	2"	.830"	ALL56212 (K6117)	Press-In

Related Components

ALL42110 LH Caliper Bracket for Granada Rotor **ALL42111** RH Caliper Bracket for Granada Rotor **ALL42118** LH Caliper Bracket for Hybrid Rotor ALL42119 RH Caliper Bracket for Hybrid Rotor

ALL42084..... LH GM Metric Caliper ALL42083 RH GM Metric Caliper

ALL72308 Granada Master Bearing and Seal Kit **ALL72309** Hybrid Master Bearing and Seal Kit

Mustang II 3-Piece Spindles

Modular design 3-piece Mustang II style spindle features a separate spindle body with bolt-on caliper bracket and steering arm for easy and affordable repairs. Spindle uses a GM

metric brake rotor, bearings and brake caliper while combining the features of a typical

Mustang II spindle including an 8° pin inclination and a short steering arm with a straight hole for using a 5/8" rod end. Spindle accepts popular ALL56204 (K6024) boltin or ALL56214 (K772) screw-in style upper ball joint and a stock 1979-88 G-body lower ball joint. IMCA approved for IMCA modifieds and sport mod divisions.

ALL55970 LH, 3-Piece Spindle Kit ALL55971 RH, 3-Piece Spindle Kit

Individual Components

ALL55974 Spindle Body ALL55972 LH Steering Arm ALL55973 RH Steering Arm

ALL55981 LH Brake Bracket ALL55982 RH Brake Bracket

ALL55983 Hardware Kit



Related Components

ALL42083 GM Metric Caliper, RH

ALL42084..... GM Metric Caliper, LH 1979-81

ALL42086..... Rotor With 5/8-11 Wheel Studs, 5 On 5" B.C.

ALL72305+.... Bearing And Seal Kit 1982-88

ALL42087 Rotor With 12mm-1.50 Wheel Studs, 5 On 4-3/4" B.C.

ALL42088..... Rotor With 5/8-11 Wheel Studs, 5 On 5" B.C.

ALL72306‡ ... Bearing And Seal Kit 1979-81 †Bearing For Race Or Cup With A 1.97" O.D. ‡Bearing For Race Or Cup With A 1.78" O.D.

AMC Pacer Spindles

The Pacer spindle is a modular design which allows the spindle to interchange from left to right by flipping the steering arm. Spindle features a 7° pin inclination and 1-1/2" per foot upper ball joint taper. Spindle also uses the same spindle pin as

the Mustang II/Pinto which accepts Hybrid style 10-1/8" rotors. Caliper bracket for GM metric caliper/Hybrid 10-1/8" rotor is sold separately.

ALL55960 Spindle w/ 1-1/2" (.750" Maj. Dia.) Lower B/J Taper ALL55961 Spindle w/ 2" (.830" Maj. Dia.) Lower B/J Taper

Individual Components

ALL55963 Bolt Kit ALL55964 Steering Arm ALL55965 Spindle Pin

ALL55966 Spindle Body 1-1/2" B/J ALL55967 Spindle Body 2" B/J

Related Components

ALL55962 Caliper Bracket Kit (1 side) ALL42084..... LH GM Metric Caliper ALL42083 RH GM Metric Caliper

ALL72309 Hybrid Master Bearing and Seal Kit



Master Wheel Bearing And Seal Kits

Kits contain all components to install one brake rotor/hub assembly including hub seal, inner bearing, outer bearing, locknut kit and dust cap.

ALL72305

ALL72305[†] GM Intermediate Metric, 1979-81 **ALL72306**[‡] GM Intermediate Metric, 1982-88

ALL72308 Ford Granada, Mustang II

ALL72309 Hybrid

†Bearing For Race Or Cup With A 1.97" O.D. ‡Bearing For Race Or Cup With A 1.78" O.D.



Metric Spindles

Replacement spindles for 1979-88 GM cars. Sold each.

ALL56318 LH ALL56319 RH

Related Components

ALL42084..... LH GM Metric Caliper ALL42083..... RH GM Metric Caliper ALL72305[†].... Master Bearing Kit, 1979-81 ALL72306[‡].... Master Bearing Kit, 1982-88 †Bearing For Race Or Cup With A 1.97" O.D.

†Bearing For Race Or Cup With A 1.97" O.D. ‡Bearing For Race Or Cup With A 1.78" O.D.

Brake Rotor 1979-81

Outer bearing race has a 1.97" O.D.

ALL42086..... Rotor With 5/8"-11 Wheel Studs, 5 On 5" B.C.

Brake Rotors 1982-88

Outer bearing race has a 1.78" O.D.

ALL42087 Rotor With 12mm-1.50 Studs, 5 On 4-3/4" B.C. **ALL42088** Rotor With 5/8"-11 Wheel Studs, 5 On 5" B.C.

Metric Spindle Savers

ALL42130

Stamped steel spindle savers strengthen GM Metric spindles, reinforcing the steering arm portion of

the spindle and making them suitable for wheel-to-wheel racing. IMCA legal and easily installed, spindle savers are retained by the lower ball joint and tie rod end retaining nuts. Sold in pairs.

Replacement Parts

ALL42135 Left Only ALL42136 Right Only

Spindle Slug Tool ALL11182

Tool easily removes spindle slugs that are pressed into fabricated spindles with a standard wrench or socket.



Three-piece GM metric G-Body spindle is a forged and heat treated direct replacement for a factory spindle with the added benefit of a stronger, replaceable steering arm and brake caliper bracket. Complete spindle includes a spindle body, bolt-on steering

arm, bolt-on brake bracket and a hardware kit. Spindle accepts stock 1979-88 G-body upper and lower ball joints, tie rod end, rotor, caliper and bearing kit. IMCA approved. Replacement components are also available for quick, easy and affordable repairs.

ALL55976 LH, 3-Piece Spindle Kit ALL55977 RH, 3-Piece Spindle Kit.

Individual Components

ALL55980 Spindle Body ALL55978 LH Steering Arm ALL55979 RH Steering Arm ALL55981 LH Brake Bracket

ALL55982 RH Brake Bracket ALL55983 Hardware Kit



ALL55976

Related Components

ALL42083 GM Metric Caliper, RH

ALL42084..... GM Metric Caliper, LH 1979-81

ALL42086..... Rotor With 5/8-11 Wheel Studs, 5 On 5" B.C.

ALL72305+.... Bearing And Seal Kit 1982-88

ALL42087..... Rotor With 12mm-1.50 Wheel Studs, 5 On

4-3/4" B.C.

ALL42088..... Rotor With 5/8-11 Wheel Studs, 5 On 5" B.C.

ALL72306‡ ... Bearing And Seal Kit 1979-81

†Bearing For Race Or Cup With A 1.97" O.D. ‡Bearing For Race Or Cup With A 1.78" O.D.

Impala Spindles

Direct replacement OE spindle for the #2 1977-96 Impalas, which is a popular choice on asphalt sportsman and modifieds requiring more brake. Spindle accepts the larger 11-7/8" x .970 rotor with the 5x5 bolt pattern and large GM brake calipers. Spindle also features a 12°

pin inclination and 2" per foot taper upper (K5208) and lower (K6145 or 10277) ball joints.

ALL55988 LH ALL55989 RH

Related Components

ALL42081..... Brake Caliper Big GM RH **ALL42082**..... Brake Caliper Big GM LH





Upper Ball Joints

Screw-In

ALL56214 (K772)

Most popular upper ball joint used. Originally used in Dodge, Chrysler and Plymouth cars. Fits Allstar ball joint holders and Lefthander chassis style upper control arm or where a screwin type ball joint is required. (Replaces Moog K772 or AFCO 20034.) 1-1/2" taper per foot.

Note: Actual product may appear different than product pictured.

Bolt-In ALL56204 (K6024)

Fits UB Machine style upper control arm where a bolt-in style ball joint is required. (Replaces Moog K6024, TRW 10185, or AFCO 20031.) Outer mounting bolt holes are 2.82" CTC. 1-1/2" taper per foot.

Note: Actual product may appear different than product pictured.

ALL56208 (K6136)

Bolt-in type joint fits Impala spindle.
Can be used to raise roll center on street stock and modified cars. Fits Impala, Camaro and Chevelle spindles. (Replaces Moog K6136, TRW 10269 or AFCO 20032-1). Outer mounting bolt holes are 2.82" CTC. 2" taper per foot.

Note: Actual product may appear different than product pictured.

ALL56220 (K5208)

Fits full-size 1971-94 Impala spindles.
Also fits 1971-81 Camaro and 1973-88
Chevelle/Monte Carlo. Replaces Moog
K5208, TRW 10268 or AFCO 20032. Outer
mounting bolt holes are 2-1/2" CTC. 2" taper
per foot.

Note: Actual product may appear different than product pictured.

Steel Upper Ball Joint Wrench ALL11190

Easily remove and install small body (ALL56214) Chrysler ball joints.

Ball Joint Spreader Tool ALL11174

Tool separates ball joint from the spindle. Inside of cylinder is shaped to fit over tapered stud of most ball joints and presses against stud of other ball joint. Not for use on FWD or 4WD applications. Tool is 4" tall fully collapsed and 6" tall fully extended.

Related Parts

ALL11175 1" Extensions (Set of two)



Lower Ball Joints

Screw-In

ALL56216 (K727)

Fits Lefthander chassis style lower control arm or where a large screw-in type ball joint is required. (Replaces - Moog K727 or AFCO 20036). 1-1/2" taper per foot.

Note: Actual product may appear different than product pictured.

ALL56217 (K719)

Compatible with stock lower control arms modified with UB Machine UBM40-3303 weld-in threaded sleeve. (Replaces - Moog K719). 1-1/2" taper per foot.

Note: Actual product may appear different than product pictured.



ALL56206 (K6141)

Ball joint fits most tubular lower CT control arms and 1971-76 Impala. Taper fits most fabricated and Impala spindles. Base O.D. is 2.190". Replaces AFCO 20038. 2" taper per foot.

ALL56210 (K5103)

Weld-in lower joint fits 1964-72 Chevelle and 1967-69 Camaro, control arms and spindle. Base O.D. is 2.015" (replaces Moog K5103, TRW 10197, or AFCO 20033). 1-1/2" taper per foot.

Note: Actual product may appear different than product pictured.

ALL56212 (K6117)

Weld-in joint fits Impala spindle. Can be used to raise the roll center on street stock or modified cars. Base O.D. is 1.975". (Replaces - Moog K6117, TRW 10264 or AFCO 20038-1). 2" taper per foot.

Note: Actual product may appear different than product pictured.

ALL56218 (K6145) (10277)

Fits popular full-size 1977-96 Impala spindles. Also fits 1971-81 Camaro and 1973-88 Chevelle/Malibu. Base O.D. is 2.090" (replaces - Moog K6145, TRW 10277 or AFCO 20039). 2" taper per foot.

Note: Actual product may appear different than product pictured.







ALL56260

Adjustable Upper Ball Joints

With mono-ball joints, upper control arm angles can be adjusted. Joints include plate, ball, tapered shaft, adjuster bushings and nut.

ALL56260 LH Large GM Joint (ALL56204

Style)

ALL56261 RH Large GM Joint (ALL56204 Style)

ALL56264 LH Mid-Size GM Joint (ALL56220 Style)
ALL56265 RH Mid-Size GM Joint (ALL56220 Style)
ALL56267 Adjustable Screw-In Upper Ball Joint (ALL56214 Style)

Replacement Parts

ALL56262 Stud For ALL56260, ALL56261 And ALL56267

ALL56267

ALL56266 Stud For ALL56264 And ALL56265 **ALL99098** Replacement Mono Ball Bearing 5/8"

Adjustable Lower Ball Joints

Replace standard ball joint with an adjustable mono-ball style lower ball joint. Includes adapter sleeve, ball, adjuster bushings, stud and nut.

ALL56270 Screw-In Chrysler Stud

(Common Dirt, ALL56216 Style)

ALL56276 Screw-In GM Impala Stud

(Common Asphalt) ALL56216 Style

With ALL56206 Pin

ALL56272 Press-In Large GM Impala Stud

(Common Asphalt, ALL56206 Style)

ALL56274 Press-In Mid-Size GM Stud (ALL56218

Style)

Replacement Parts

ALL56271 Stud For ALL56270

ALL56273 Stud For ALL56272 And ALL56276

ALL56275 Stud For ALL56274

ALL99092 Housing For ALL56270 And ALL56276

ALL99093 Housing For ALL56272 ALL99094 Housing For ALL56274 ALL58002 Replacement Mono-Ball ALL99096 Replacement Snap Ring ALL99097 Replacement Spacer Kit Steel sleeves allow cust

Steel sleeves allow custom fabrication of control arms.

Ball Joint Sleeves

ALL56250 Small Screw-In ALL56214/ALL56217

(K772/K719)

ALL56251 Large Screw-In ALL56216 (K727) **ALL56252** Large Press-In ALL56206 (K6141) **ALL56253** Med. Press-In ALL56212 (K6117)

Ball Joint Adapter Sleeve

ALL56256

Adapter sleeve is ideal for modifying stock style Chevelle lower control arms to accept a screw-in style ball joint. Adapter sleeve has an O.D. of 2.010" to take the place of a press-in style ball joint (ALL56210/K5103), allowing for installation of a screw in style ALL56214 with a 1.5" taper/ft. pin or ALL56049 with a 2" taper/ft. pin ball joint.

Note: Modifications to control arms may be necessary for proper fit of sleeve. Sleeve must be welded to the control arm after installation.

Adapter Bushing ALL56225

Convert a 2" taper per foot hole to accept a ball joint with a 1-1/2" taper per foot. For lower ball joints only.



Taper Reamers

Repair or enlarge tapered holes to accept tie rod ends or ball joints. Reamers may be used in a drill with a 1/2" chuck by removing the T-handle.

ALL11170 Reamer, 7.15°, 1-1/2" Taper Per Ft. **ALL11172** Reamer, 9.56°, 2" Taper Per Ft.

Taper Reamer Specifications For Ball Joints

Part No.	Taper Specs	Part No.	Taper Specs
Ball Joint		Ball Joint	
ALL56204	1-1/2" Per Ft.	ALL56217	1-1/2" Per Ft.
ALL56206	2" Per Ft.	ALL56218	2" Per Ft.
ALL56208	2" Per Ft.	ALL56220	2" Per Ft.
ALL56210	1-1/2" Per Ft.	ALL56280	1-1/2" Per Ft.
ALL56212	2" Per Ft.	ALL56284	1-1/2" Per Ft.
ALL56214	1-1/2" Per Ft.	ALL56286	1-1/2" Per Ft.
ALL56216	1-1/2" Per Ft.	_	_







Chris Madden



Non-Take-Apart Low Friction Ball Joints

Low friction, economical OEM ball joints are high performance units designed for smooth suspension travel. Some ball joints are available with longer than stock pin length for correcting roll centers. Ball joints have hardened pins with stock type housings and are not rebuildable. Legal for classes that require non-take apart ball joints as these are non-serviceable. For Off-road use only.



Upper Ball Joints

Part No.	Style	Size	Pin Length	Taper	Reference	Repl. Pin Only	Take-Apart Style
ALL56010	Screw-In	Small	Standard	1-1/2"	K772	-	ALL56800
ALL56011	Screw-In	Small	1/2" Longer	1-1/2"	K772	-	ALL56801
ALL56012	Screw-In	Small	1" Longer	1-1/2"	K772	-	ALL56012
ALL56008	Screw-In	Small	1-1/2" Longer	1-1/2"	K772	-	-
ALL56009	Screw-In	Small	2" Longer	1-1/2"	K772	-	-
ALL56014	Bolt-In	Large	Standard	1-1/2"	K6024	-	-
ALL56015	Bolt-In	Large	3/8" Longer	1-1/2"	K6136	-	-
ALL56018	Bolt-In	Small	Standard	2"	K5208	-	-
ALL56019	Bolt-In	Small	1/2" Longer	2"	K5208	-	-
ALL56020	Bolt-In	Small	1" Longer	2"	K5208	-	-

Lower Ball Joints

Part No.	Style	Size	Pin Length	Taper	Reference	Repl. Pin Only	Take-Apart Style
ALL56030	Screw-In	Large	Standard	1-1/2"	K727	-	ALL56805
ALL56031	Screw-In	Large	1/2" Longer	1-1/2"	K727	-	ALL56806
ALL56034	Screw-In	Large	Standard	2"	K727 w/ K6141 Pin	-	ALL56810
ALL56035	Screw-In	Large	1/2" Longer	2"	K727 w/ K6141 Pin	-	ALL56811
ALL56049†	Screw-In	Large	Standard	2"	K772 w/ K727 Pin	-	ALL56815†
ALL56050†	Screw-In	Large	1/2" Longer	2"	K772 w/ K727 Pin	-	ALL56816†
ALL56051†	Screw-In	Large	1" Longer	2"	K772 w/ K727 Pin	-	ALL56817†
ALL56042	Press-In	Chevelle	Standard	1-1/2"	K5103	-	-
ALL56027	Press-In	Chevelle	Standard	2"	K5103 w/ K6141 Pin	-	ALL56820
ALL56028	Press-In	Chevelle	1/2" Longer	2"	K5103 w/ K6141 Pin	-	ALL56821
ALL56029	Press-In	Chevelle	1" Longer	2"	K5103 w/ K6141 Pin	-	ALL56822
ALL56044	Press-In	-	Standard	2"	K6117	-	-
ALL56046	Press-In	-	Standard	2"	K6145	-	-
ALL56047	Press-In	-	1/2" Longer	2"	K6145	-	-
ALL56048	Press-In	-	1" Longer	2"	K6145	-	-

[†]Commonly used with ALL56256 ball joint adapter sleeve.





Rick Eckert Tanner English



Take-Apart Low Friction Ball Joints

Low friction serviceable ball joints are the same great quality you have come to expect from our original low friction ball joints with the ability to exchange pins to adjust roll center or make repairs. For Off-road use only.



Upper Ball Joints



							Take-Apart
Part No.	Style	Size	Pin Length	Taper	Reference	Repl. Pin Only	Style
ALL56810	Screw-In	Small	Std	1.5"	K772	ALL56840	ALL56010
ALL56811	Screw-In	Small	1/2"	1.5"	K772	ALL56841	ALL56011
ALL56812	Screw-In	Small	1"	1.5"	K772	ALL56842	ALL56012

Lower Ball Joints



Part No.	Style	Size	Pin Length	Taper	Reference	Repl. Pin Only	Take-Apart Style
ALL56815	Screw-In	Large	Std	1.5"	K727	ALL56845	ALL56030
ALL56816	Screw-In	Large	1/2"	1.5"	K727	ALL56846	ALL56031
ALL56820	Screw-In	Large	Std	2"	K727 w/ K6141 Pin	ALL56850	ALL56034
ALL56821	Screw-In	Large	1/2"	2"	K727 w/ K6141 Pin	ALL56851	ALL56035
ALL56822	Screw-In	Large	1"	2"	K727 w/ K6141 Pin	ALL56852	-
ALL56825†	Screw-In	Small	Std	2"	K772 w/ K6141 Pin	ALL56850	ALL56049†
ALL56826†	Screw-In	Small	1/2"	2"	K772 w/ K6141 Pin	ALL56851	ALL56050†
ALL56827†	Screw-In	Small	1"	2"	K772 w/ K6141 Pin	ALL56852	ALL56051†
ALL56830	Press-In	Chevelle	Std	2"	K5103 w/ K6141 Pin	ALL56850	ALL56027
ALL56831	Press-In	Chevelle	1/2"	2"	K5103 w/ K6141 Pin	ALL56851	ALL56028
ALL56832	Press-In	Chevelle	1"	2"	K5103 w/ K6141 Pin	ALL56852	ALL56029

[†]Commonly used with ALL56256 ball joint adapter sleeve.

Straight Pin Take-Apart Low Friction Ball Joints

Low friction straight pin ball joints are designed to fit spindles with straight-through 3/4" mounting holes. Straight pin design allows height adjustment by relocating the shim stack for more accurate and precise changes versus changing out entire pin. For Off-road use only.

Note: Machining of most standard spindles from tapered to straight through mounting holes is required for use with this style ball joint.

Part No.	Style	Size	Housing Ref.	Adj Range
ALL56871	Screw-In	Small	K772	Std to 1" Pin
ALL56872	Screw-In	Small	K772	1" to 2" Pin
ALL56875	Screw-In	Large	K727	Std to 1" Pin
ALL56876	Screw-In	Large	K727	1" to 2" Pin
ALL56878	Press-In	Chevelle	K5103	Std to 1" Pin
ALL56879	Press-In	Chevelle	K5103	1" to 2" Pin

Individual Components

Housings

ALL56880 Small Screw-In Housing (K772) ALL56881 Large Screw-In Housing (K727) ALL56882 Chevelle Press-In Housing (K5103)

ALL56885 Standard to 1" Pin ALL56886 1" to 2" Pin

Hardware

ALL56890..... Shim Kit ALL56892 Housing Cap









ALL56865

ALL56876

www.allstarperformance.com



Upper Control Arms

Powder coated, bushing style A-arms are available with steel or aluminum cross shaft and a straight or 10° ball joint position. Shaft bolt holes are 1/2" diameter, spaced 6" on center. Tig welded .095"



ALL57906

D.O.M. tube construction. Bolt-in style arms accept ALL56204 or Moog K6024 ball joints. Screw-in style arms accept ALL56214 or Moog K772 ball joints.

Size	Bolt-In Alum. Shaft	Bolt-In Steel Shaft	Screw-In 10° Alum. Shaft	Screw-In 10° Steel Shaft
7"	-	-	ALL57940	_
7-1/4"	_	-	ALL57941	-
7-1/2"	ALL57902	ALL57922	ALL57942	ALL57962
7-3/4"	ALL57903	-	ALL57943	-
8"	ALL57904	ALL57924	ALL57944	ALL57964
8-1/4"	ALL57905	-	ALL57945	-
8-1/2"	ALL57906	ALL57926	ALL57946	ALL57966
8-3/4"	ALL57907	-	ALL57947	-
9"	ALL57908	ALL57928	ALL57948	ALL57968
9-1/4"	ALL57909	-	ALL57949	-
9-1/2"	ALL57910	ALL57930	ALL57950	ALL57970
9-3/4"	ALL57911	-	ALL57951	-
10"	ALL57912	ALL57932	ALL57952	ALL57972
10-1/4"	ALL57913	-	ALL57953	-
10-1/2"	ALL57914	ALL57934	ALL57954	ALL57974
11"	ALL57916	ALL57936	ALL57956	ALL57976

Metric Upper Control Arms

Tubular style upper control arms replace OE stamped style arms found on Midsize GM metric chassis with mounts spaced 6-7/8" on center and accept bolt-in style ball joints. Arms feature



steel cross shafts, a durable powder coated finish ALL57990 and greaseable pivot points for easy maintenance.

Control Arms for ALL56220 (K5208) Ball Joint

ALL57990 RH, 8" ALL57992 LH, 8-1/2" ALL57994 LH, 9" ALL57995 LH, 9-1/2" ALL57996 LH, 10"

Control Arms for ALL56204 (K6024) Ball Joint

ALL57980 RH, 8" ALL57982 LH, 8-1/2" ALL57984 LH, 9" ALL57985 LH, 9-1/2"

ALL57986 LH, 10"



IMCA Legal Upper Control Arms

IMCA legal upper control arms fit stock 6-7/8" mounts, found on mid-size GM Metric frames. Use



ALL57831

with bolt-in style ball joint, Allstar 56220 or Moog K5208. Steel control arms are available with steel or aluminum cross shaft and come complete with "IMCA certified" sticker.

ALL57830 RH, 8" With Steel Cross Shaft ALL57831 LH, 8-1/2" With Steel Cross Shaft ALL57832 RH, 8" With Aluminum Cross Shaft ALL57833 LH, 8-1/2" With Aluminum Cross Shaft

Ball Joint Holders



ALL56294

ALL56295

ALL56291

ALL56296 ALL56297

Holders are ideal for those who fabricate their own control arms. The holders have a 5/8" male RH thread and a 3/8" hole, commonly used with a clevis. Holders accept ALL56214 or Moog K772 style screw-in ball joints.

ALL56294 LH Angled Stud, Angled Tab, Wide Spread ALL56295 RH Angled Stud, Straight Tab, Wide Spread ALL56296 Universal Straight Stud, Straight Tab, Wide Spread ALL56297 Universal Design (ALL56296) Angled At 15° ALL56194 5/8" RH Steel Clevis (Commonly Needed) ALL56214 Screw-In Ball Joint (Most Common)

Unwelded Ball Joint Holder

Kit ALL56298



Kit allows components to be welded at any angle. Stud is

5/8"-18RH thread, bracket has a 3/8" hole. Holder accepts ALL56214 or Moog K772 style screw-in upper ball joint.

Female Double Adjusters

Steel double adjusters increase adjustment capability of control arms, trailing arms, Panhard bars, tie rod ends and other items using threaded tube. Adjuster includes two jam nuts, one LH and one RH.

ALL56198 5/8"-18 RH Male/LH Female, 4" Long **ALL56199** 5/8"-18 LH Male/RH Female, 4" Long

Steel Clevises





Clevises are commonly used with a ball joint holder when building upper control arm or with strut style lower control arm when attaching suspension tube for a strut rod.

ALL56192 3/4"-16 RH Thread Clevis with 1/2" Holes **ALL56194** 5/8"-18 RH Thread Clevis with 3/8" Holes



Upper Control Arm Mounting Bracket ALL60190

Bracket is flame cut from 1/2" thick steel, with 6" bolt spacing. Welds to frame and accepts upper A-arm.



Upper Control Arm Shims

Individual steel shims fit between the upper control arm and chassis mount to adjust caster and camber. Shims have 9/16" wide slots and easy-to-grasp tabs for installation and removal. Package of 10.

ALL60200..... 1/16" (0.062") **ALL60201**..... 1/8" (0.125")

1-Piece Upper Control Arm Shims

Dual mount shims fit between the upper control arm and chassis mount to adjust camber. One-piece design works with most mounts/control arms with 6" bolt spacing using 1/2" mounting hardware. Sold each.

ALL60203 1/8" (0.125") ALL60204 3/16" (0.185") ALL60205 1/4" (0.250") ALL60206 3/8" (0.375") ALL60207 1/2" (0.500")

ALL60207 1/2 (0.500) ALL60208 3/4" (0.750") ALL60209 1" (1.00")

ALL60210 7-Piece Kit, Includes ALL60203-60209 (1 of each)

ALL60205

Slotted Upper Control Arm Bracket Kit ALL60077

Kits contain (2) slotted brackets, (2) centered bushings, (2) reducer spacers for 5/8" rod end and a 1/2" bolt and nyloc nut. Offset aluminum bushings (sold separately) allow for plenty of adjustment options.

Insert Bushings

ALL60080	Centered Bushings (Pair)
	1/8" Offset Bushings (Pair)
ALL60082	1/4" Offset Bushings (Pair)
ALL60083	3/8" Offset Bushings (Pair)
Δ1160084	1/2" Offset Bushings (Pair)

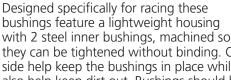
Individual Components

ALL60078	Slotted Upper Brackets (Pair)
ALL18612	Reducer Spacers For 5/8" Rod End
ALL16490	Hex Head Bolts 1/2"-20 x 3", Grade 5,
	5-Pack

ALL16074-10 Thin Nyloc Insert Nuts 1/2"-20, 10-Pack

Upper Control Arm Brackets ALL60025

Stamped 3/16" mild steel brackets weld to chassis as a mounting point for upper control arm. Brackets have two 5/8" holes, spaced 7/8" apart for adjustment. May be trimmed to desired height. Package of 2.



Low Friction Lower

Control Arm Bushings

Lightweight,

they can be tightened without binding. O-rings on each side help keep the bushings in place while installing and also help keep dirt out. Bushings should be disassembled and reassembled with a good quality wheel bearing grease prior to installation.

Chevelle 1964 - 1974 ALL56227 Front ALL56229 Rear Metric 1978 - 1988 ALL56228 Front ALL56229 Rear



Steel Control Arm Bushings

Allstar Steel Control Arm Bushings replace stock rubber bushings and eliminate deflection, a common problem with original equipment bushings.



ALL56228

Lower Control Arm Bushing Applications

Part No.	Application	Bushing Position	0.D.	UHL	Hole Size			
Chevelle	Chevelle, Monte Carlo, GM Intermediates							
ALL56230	1964-66	Front (2nd Design)	1.345"	2.100"	.500"			
ALL30230	1967-74	Front	1.345"	2.100"	.500"			
	1964-66	Front (1st Design)	1.645"	2.100"	.500"			
ALL56232	1975-77	Front	1.645"	2.100"	.500"			
ALL30232	1964-72	Rear	1.645"	2.100"	.500"			
	1978-88	Rear	1.645"	2.100"	.500"			
ALL56233	-	-	1.645"	2.100"	.562"			
ALL56234	1973-77	Rear	1.900"	2.100"	.500"			
ALL56235	_	_	1.900"	2.100"	.562"			
ALL56236	1978-88	Front	1.440"	2.750"	.500"			
Camaro,	Firebird							
ALL56230	1967-74	Front	1.345"	2.100"	.500"			
ALL56232	1975-81	Front	1.645"	2.100"	.500"			
ALLS0232	1967-72	Rear	1.645"	2.100"	.500"			
ALL56234	1973-88	Rear	1.900"	2.100"	.500"			
ALL56236	1982-92	Front	1.440"	2.750"	.500"			

Upper Control Arm Bushing Applications

Part No.	Application	Bushing Position	0.D.	UHL	Hole Size			
Chevelle,	Chevelle, Monte Carlo, GM Intermediates							
ALL56238	1967-72	All	1.275"	1.250"	.675"			
ALL56240	1978-88	All	1.530"	1.500"	.695"			
ALL56242	1973-77	Front	1.394"	1.500"	.690"			
ALL56244	1973-77	Rear	1.311"	1.425"	.690"			
Camaro,	Firebird							
ALL56238	1967-69	All	1.275"	1.250"	.675"			
ALL56242	1974-79	Front	1.394"	1.500"	.690"			
ALL56244	1974-79	Rear	1.311"	1.425"	.690"			



Roller Bearing Lower Control Arm Bushings

Free up stock front suspensions and help prevent binding commonly found with stock rubber and steel insert bushings. Steel bodied bushings are complete with needle roller bearings and hardened inserts that are ready to install and do not require special mounting hardware. All bushings have 1/2" I.D. mounting holes





Part No.	Application	Bushing Position	0.D.	UHL	Hole Size		
Chevelle	Chevelle, Monte Carlo, GM Intermediates						
ALL56221	1964-66	Front (2nd Design)	1.345"	2.100"	.500"		
ALL30221	1967-74	Front	1.345"	2.100"	.500"		
	1964-66	Front (1st Design)	1.645"	2.100"	.500"		
ALL56222	1975-77	Front	1.645"	2.100"	.500"		
ALLS6222	1964-72	Rear	1.645"	2.100"	.500"		
	1978-88	Rear	1.645"	2.100"	.500"		
ALL56223	1973-77	Rear	1.900"	2.100"	.500"		
ALL56224	1978-88	Front	1.440"	2.750"	.500"		
Camaro,	Firebird						
ALL56221	1967-74	Front	1.345"	2.100"	.500"		
ALL56222	1975-81	Front	1.645"	2.100"	.500"		
ALLSOZZZ	1967-72	Rear	1.645"	2.100"	.500"		
ALL56223	1973-88	Rear	1.900"	2.100"	.500"		
ALL56224	1982-92	Front	1.440"	2.750"	.500"		

Replacement Parts

ALL99250 Thrust Bearing Set



ALL56226 Nylon Bushing Kit

(Optional bushings to replace roller bearings when conforming to some sanctioning body rules.)



1978-88 Metric Front Lower Control Arms

Reproduction of the originals, these new arms are a direct replacement for 1978-88 metric chassis and accept stock ball joints.





1964-72 Chevelle Lower Control Arms

Reproduction 1964-72 A-body lower control arms are coated and have the same fit and



appearance as the factory arms. Both versions are made to meet the same tolerance as the original. The deluxe arms have a more precise spring pocket for more consistent suspension geometry. They also accept the larger wire diameter of heavier rated racing springs.

ALL57800 RH ALL57801 LH ALL57802 RH Deluxe ALL57803 LH Deluxe

Ball Joint Adapter Sleeve

ALL56256

Adapter sleeve is ideal for modifying stock style Chevelle lower control arms to accept a screw-in style ball joint. Adapter sleeve has an O.D. of 2.010" to take the place of a press-in style ball joint (ALL56210/K5103) allowing for installation of a screw in style ALL56214 with a 1-1/2" taper/ft. pin or ALL56049 with a 2" taper/ft. pin ball joint. Note: Modifications to control arms may be necessary for proper fit of sleeve. Sleeve must be welded to the control arm after installation.

TECH TIP

To minimize distortion of sleeve during press-in, it is recommended that the ball joint be threaded into sleeve during press-in procedure.

Spring Ramp ALL56326

Ramp welds to the flat spring pocket area of aftermarket control arms to support the open end of conventional 5" or 5-1/2" springs, allowing springs to be used in the traditional position.

1

Chevelle Tubular Lower Control Arms – Helix Bottom





Heavy duty control arms are made with 1-1/4" D.O.M. tubing with 1" D.O.M. cross bracing. Helix bottom correctly positions 5" or 5-1/2" conventional spring for proper performance. Black powder coated with high quality rod ends and separate shock bracket which will require welding or bolting onto the arm. Rod end spacer kit is required to adapt rod end to fit in the stock frame mount (sold separately). These lower control arms are intended for racing and will not accept stock style lower ball joints.

Press-In Ball Joint Control Arms (Use ALL56212/K6117)

ALL57810 RH ALL57811 LH

Screw-In Ball Joint Control Arms (Use ALL56216/K727)

ALL57812 RH

ALL57814 RH 1" Longer

ALL57813 LH

Related Part

ALL56322 '68-72 Chevelle A-arm Spacer Kit, 4-Pieces

ALL56106

ALL56095



Tubular Lower Control Arms – Flat Bottom

Heavy duty control arms are made with 1-1/4" D.O.M. tubing and 1" D.O.M. cross bracing. Flat bottom design works with 5" or 5-1/2" conventional springs which must be



mounted with the closed end seated in the control arm and the open end in the upper spring cup or a spring ramp (sold separately) may be welded onto the lower plate to place the open end down. Black powder coated arms feature high quality rod ends and separate shock bracket which will require welding or bolting onto arm. Rod end spacer kit is required to adapt rod end to fit in the stock frame mount (sold separately). These lower control arms are intended for racing and will not accept stock style lower ball joints.

Press-In Ball Joint Control Arms (Use ALL56212/K6117)

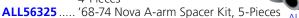
ALL56320 RH, '64-72 Chevelle

ALL56328 RH, '64-72 Chevelle 1" Longer

ALL56321 LH. '64-72 Chevelle ALL56323 RH, '68-74 Nova ALL56324 LH. '68-74 Nova

Related Parts

ALL56322 '68-72 Chevelle A-arm Spacer Kit, 4-Pieces



ALL56326 Spring Ramp (Helix)

Note: Ball joints should be tack welded into lower control arm after assembly.

Lower Control Arm Limit Clamps

Clamps fasten around tubular lower control arms providing a lower mounting point for a suspension limit chain. Aluminum Clamps are double shear style and accept 5/16" hardware.

ALL68340 1" **ALL68341** 1-1/8" ALL68342 1-1/4"

Lower Control Arm Kits

Universal kits are 2" longer than standard arms and must be cut to length before welding slug into place. Ball joint sold separately.



ALL56186 LH Kit, Use With Screw-In Ball Joint (ALL56216) ALL56187 RH Kit, Use With Screw-In Ball Joint (ALL56216)

Double Adjusters

Steel double adjusters increase adjustment capability of control arms, trailing arms, Panhard bars, tie rod ends and other items using threaded tube. Adjuster includes one LH and one RH jam nut.



ALL56196 5/8"-18 RH Male/LH Male, 4-1/4" Long **ALL56197** 3/4"-16 RH Male/LH Male, 5" Long ALL56198 5/8"-18 RH Male/LH Female, 4" Long ALL56199 5/8"-18 LH Male/RH Female, 4" Long

Coarse Thread Weight Jack Bolts

Weight jack bolts have 1"-8 threads for guick adjustment. Use with ALL56113, ALL56114 and ALL56115 style spring plates.

ALL56106 8" Steel ALL56107 11" Steel

Weight Jack Bolts With Internal Thread

Bolts have a 7/16"-20 internal thread on one end for use with bolt-on and swiveler spring cups. Coarse thread bolts have 1"-8 outer threads while fine thread bolts are 1-1/8"-12.

Coarse Thread 1"-8 With 3/4" Hex

ALL56094 4" Steel ALL56095 6" Steel ALL56066 8" Steel ALL56067 11" Steel



Fine Thread 1-1/8"-12 With 1/2" Square Drive

ALL56090 6" Aluminum ALL56091 8" Aluminum ALL56092 6" Steel ALL56093 8" Steel



Jam Nuts **For Jack Bolts**

Steel jam nuts for jack bolts

ALL56068 ALL56110 ALL99052 ALL56068..... 1"-8 (Coarse) 1-1/8" Wrench ALL56110 1"-8 (Coarse) 1-1/2" Wrench ALL99052 1-1/8"-12 (Fine) 1-3/8" Wrench

Weight Jack Bolt Collars

Steel collar typically welds onto frame or chassis for installation of a threaded jack bolt. Collar includes grease fitting.

ALL56099 1"-8 **ALL56098**..... 1-1/8"-12

Weight Jack Bolt Sleeves

Weld-in mild steel sleeve provides a mounting point for jack bolts or adjustable shock mounts. Sleeves are 2" long and have a 1-3/8" O.D. for welding onto chassis tubing.

ALL56109 1"-8, Coarse Thread ALL56073 1-1/8"-12, Fine Thread

Weight Jack Plate ALL56112

Heavy-duty steel plate has a threaded boss welded to the center to accept jack bolts with 1"-8 coarse threads. O.D. is 5".



ALL56073

Coarse Thread Nut With Sleeve **ALL56111**

Steel coarse thread nut with sleeve has 1"-8 coarse threads.





Coil-Over Load Bolt Assembly

ALL56074

Threaded aluminum bolt is 6" long with 1-1/8"-12 fine threads and is commonly used on big bar, soft spring cars. Load bolt offers the ability to easily change corner weights, change the centerto-center distance of the shock, adjust bump stop distances without adding shims and adjust ride height without running out of shock travel. Commonly used with ALL56098 threaded sleeve.

ALL56075 Replacement Shock End



Upper Spring Cups

Steel cups work with most 5" and 5-1/2" O.D. springs and either 1" or 1-1/8" jack bolts.

ALL56114..... Standard Cup For 5" Spring ALL56115..... Oversized Cup For 5-1/2" Spring



ALL56114

Lightweight **Upper Spring Cup ALL56113**

Lightweight steel cup works with most 5" and 5-1/2" O.D. springs and either 1" or 1-1/8" jack bolts.



Bolt-On Upper Spring Cup ALL56097

Steel cup bolts to internal thread jack bolt and keeps 5" or 5-1/2" spring centered to the jack bolt.



Bolt-On Spring Cup

ALL56117

Aluminum cup for 5" spring features a 1/2" mounting hole for use with internal threaded iack bolts, used as a rear lower cup or modified to fit shock shafts.



Extended Length Upper Spring Cup ALL56125

Commonly used in rear suspensions, cup connects to jack bolt with a 7/16"-20 bolt to help maintain spring location. Extension sits 5" into the spring.



Extended Length "Swiveler" **Spring Cup ALL56079**

Extended length cup helps keep spring centered. Also keeps spring from falling out on some modern day long drop suspension packages.



"Swiveler" Spring Cups

Swiveler cup is used in place of a standard upper spring plate and weight jack bolt on vehicles using conventional style coil springs. Mono-ball stud mount allows cup to pivot as needed to prevent binding during suspension travel and requires a weight jack bolt with a 7/16"-20 internal threaded end for proper installation.

Welded Style ALL56080

The sleeve and top are welded together on this unit to fit most applications using a 5" conventional spring.



Pro-Series

Components bolt together to select the desired spring top plate and sleeve separately to build custom size cups.

ALL56077 Spring Top Plate For 5" Spring ALL56078 Spring Top Plate For 5-1/2" Spring

ALL56086 3-1/4" Spring Sleeve **ALL56087** 3-1/2" Spring Sleeve ALL56088 3-3/4" Spring Sleeve ALL56089 4" Spring Sleeve

ALL56085 4-1/4" Spring Sleeve



ALL56077



ALL56086

Coil Spring Spacer ALL56116

Spacer for 5" racing spring welds into spring pocket enabling chassis adjustments to Street Stock and other race cars that are not allowed to use weight jack bolts or threaded adjusters. 3" tall spacer may be cut

to desired height before installation. Use coil shim spacers ALL56120 and ALL56121 to make chassis adjustments.

Coil Spring Shims

Used with ALL56116, or whenever weight jack bolts are not allowed, to raise car height for set-up purposes. 5" diameter, 3-5/8" I.D.



ALL56120 3/16" Shim ALL56121 1/8" Shim

Adjustable Coil Spring Spacers

Adjustable spacers for 5" racing springs weld into spring pockets enabling chassis adjustments to





ALL56118 ALI 56119

street stock and other race cars that are not allowed to use weight jack bolts.

ALL56118 All Steel Adjuster

ALL56119..... Steel Sleeve With Alum. Adj. Nut



Sway Bar Bolts

Bolts have 7/8"-9 threads and are available in a fixed or swivel end design. Swivel end bolts have a 1/2" square drive end for quick and easy adjustments.



Part No.	Description	Eye I.D.	Eye O.D.	_	Eye Center To End Of Threads
ALL56070	Steel Swivel	1-5/8"	2"	1-1/8"	11-1/2"
ALL56071	Steel Swivel	2"	2-3/4"	1-1/8"	12"
ALL56100	Steel Non-Swivel	1-1/2"	2"	1-1/8"	11-1/2"

Related Parts

ALL18266...... Lock Nut For ALL56100-56102 **ALL56072** Weld Nut For ALL56070-56071



Adjustable Sway Bar Bolt Kit

ALL56103

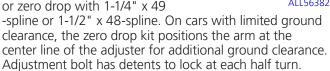
Kit includes a 3-5/8" long sleeve that welds into frame rail with a locking collar to prevent movement. Adjustment bolt has 4" of travel and adjusts with a 1/2" square drive ratchet. Inside eye diameter 1-1/2".

Replacement Part

ALL99020 Adjuster Bolt With Eye End

Adjustable Sway Bar Arms

Kit includes a CNC-machined aluminum adjuster and a 17-1/2" long steel arm. Adjuster is available in 30° or zero drop with 1-1/4" x 49



Description	Spline	Complete Assemebly	Adjuster Assembly	Side Plate Only
RH 30 Degree Drop	1-1/4" x 49	ALL56380	ALL99470	ALL99471
RH 30 Degree Drop	1-1/2" x 48	ALL56381	ALL99472	ALL99473
RH Zero Drop	1-1/4" x 49	ALL56382	ALL99474	ALL99475
RH Zero Drop	1-1/2" x 48	ALL56383	ALL99476	ALL99477



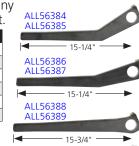
Andy Bozell

ALL56380

Sway Bar Arms

Splined sway bar arms are made from 3/4" thick mild steel. Arms are available straight or in 15° or 30° drop. Arms can be cut to length and bent to fit any width chassis. Includes pinch bolt.

Part No.	Description	Spline
ALL56384	30° Drop	1-1/4" x 49
ALL56385	30 ° Drop	1-1/2" x 48
ALL56386	15° Drop	1-1/4" x 49
ALL56387	15° Drop	1-1/2" x 48
ALL56388	Straight	1-1/4" x 49
ALL56389	Straight	1-1/2" x 48



Shock Travel Indicator Kits

Check compression and rebound travel of coil-over shocks at a glance. Clamp aluminum bracket portion of the kit directly to the coil-over sleeve or shock body and attach the other end to the existing shock eye bolt or under spring cup. May be used with most coil-over and non-coil-over shocks. Clamp is included.

ALL60094..... Kit For Use With 2-1/2" Spring

ALL60095 Kit For Use With 3" Barrel or 5" Springs



Ground Clearance Indicator ALL10725

Determine how close the frame is to the ground on the race track. This unique kit features an aluminum bracket that rivets

features an aluminum bracket that rivets to the frame with an adjustable 4" plastic wear rod.



Replacement Part

ALL10726..... Wear Rods, 4-Pack



Phil Bozell

ALLSTAR' PERFORMANCE

Quick Adjust External Bump Stop Kit

External bump stop allows adjustment of suspension travel separate from the coil-over unit. The detented adjuster nut can be turned on the rod end for quick engagement adjustment. Each half turn equals 1/16" eliminating the need for packer shims. Bump stop bolts to the outside of lower control arm and to an upper chassis location (may need to drill a hole or use a clamp on bracket). Fine tune vehicle set-up by adjusting the upper bushing plate. Includes built-in travel indicator and two yellow 75 durometer bushings. Will also accept bump springs with 5/8" I.D. retainers (not included)

ALL56361 Bump Stop w/ Bushings ALL56360 Bump Stop w/o Bushings

Ride Height Set-Up Stick ALL10658

Stick replaces the coil over shock and spring assembly during maintenance. Stick has many uses and may be adjusted to check settings at normal ride

height, in race attitude or on the bump stops to evaluate suspension travel. Adjusts from 15" to 24", measured at

the center of rod ends.

Shock Racks

Shock rack holds four shocks with 2-1/2" springs and easily mounts to trailer, shop wall or pit cart. Rack is designed to hold shocks in place by pushing shock rod end or eye over the outer O-ring or alternatively, the outer O-ring may be removed to expose a predrilled hole for a hairpin clip such as ALL18442, sold separately.

ALL12212..... Standard Rack **ALL12211**..... Adjustable Base Rack

Extended Length Shock Rack Pin

ALL12215

Extended length pin replaces the pin used on our standard and adjustable shock racks allowing a shock or eliminator with a 5" spring to be mounted to

the rack. Pins are also ideal for creating custom mounting for use on toolboxes or pit carts. The outer o-ring may be removed to expose a predrilled hole for a hairpin clip such as ALL18442, sold separately.

Shock Eye Socket ALL64255

The ideal tool for shock rebuilders or anyone that disassembles shocks on a regular basis! Unique socket safely removes and installs the shock rod end without risk of damage to the spherical ball. Steel socket contacts





the outer housing of 1/2" rod ends up to .640" wide and has a 1/2" drive for ratchet or impact use.

Shock Inflation Tool ALL64260

Shock inflation tool threads onto shock Schrader valves. Fill valve and 0-300 PSI gauge head independently rotate a full 360°, for easy filling and reading. Complete with built-in bleeder and includes a protective storage case.



Shock Workstation ALL64264

The all-in-one shock workstation holds most shock bodies in the upright position for ease of shaft removal or assembly and holds shock shafts vertical or horizontal for easier repairs and re-valving. Aluminum workstation can be placed in a vise, bench mounted using optional mounting bracket or custom mounted using 1/4" fasteners.

Shock Workstation Base ALL64267

Steel base is helpful when mounting Allstar shock workstation (ALL64264) in a trailer or to a shop workbench.

Mounting hardware included.





Tyler Courtney



14mm Bump Stop Kit ALL64360

Kit makes it easy to start using bump stops. Includes a selection of 20 bump stop pucks ranging from 50 to 75 durometer, 8 backing washers and 16 packer shims in a simple plastic carrying case.



Bump Stop Pucks - 14mm

Pucks are replacement components found in ALL64360 bump stop kit, in addition to other durometer ratings for even more adjustability. 2" O.D. pucks have a 1/2" I.D. hole suitable for 14mm shocks as well as many other uses, including suspension limiters.

Bump Stop Pucks	1/2" Tall	3/4" Tall	1" Tall
40dr Brown	ALL64367	ALL64368	ALL64369
50dr Green	ALL64370	ALL64371	ALL64372
55dr Orange	ALL64373	ALL64374	ALL64375
60dr Purple	ALL64376	ALL64377	ALL64378
65dr Black	ALL64379	ALL64380	ALL64381
75dr Yellow	ALL64384	ALL64385	ALL64386

Aluminum Backing Washer ALL64366

Aluminum washer is designed for use with 14mm bump stop pucks, as a backer washer or many other uses. Washer has a 2-1/4" O.D., 1/2" I.D. and is 3/16" thick.



Bump Stop Shims - 14mm

Place within the bump stop stack to limit suspension

travel. 2" O.D. shims work with most 14mm shocks.





Shock Bump Covers

These neoprene covers are perfect for protecting shock shafts and covering bump set ups. Fit 2" O.D. shocks. Not for use with coil over springs.

ALL64216 10" Tall Cover **ALL64218** 14" Tall Cover

16mm Bump Stop Kit

ALL64320

Kit makes it easy to start using bump stops. Includes a selection of 20 bump stop pucks ranging from 50 to 75 durometer, 8 backing washers and 16 packer shims in a simple plastic carrying case.



Bump Stop Pucks - 16mm

Pucks are replacement components found in ALL64320 Bump Stop Kit, in addition to other durometer ratings for even more adjustability. 2.10" O.D. pucks have a 5/8" I.D. hole suitable for 16mm shocks as well as many other uses, including suspension limiters.

Bump Stop Pucks	1/2" Tall	3/4" Tall	1" Tall
40dr Brown	ALL64327	ALL64328	ALL64329
50dr Green	ALL64330	ALL64331	ALL64332
55dr Orange	ALL64333	ALL64334	ALL64335
60dr Purple	ALL64336	ALL64337	ALL64338
65dr Black	ALL64339	ALL64340	ALL64341
75dr Yellow	ALL64344	ALL64345	ALL64346

Aluminum Backing Washer ALL64326

Aluminum washer is designed for use with 16mm bump stop pucks, as a backer washer or many other uses. Washer has a 2-1/4" O.D., 5/8" I.D. and is 3/16" thick.



- ALL64274

ALL64275

- ALL64276

← ALL64277

Option

Bump Stop Shims - 16mm

Place within the bump stop stack to limit suspension travel. 2" O.D. shims work with most 16mm shocks.



ALL64323 1/32" Shim **ALL64324** 1/16" Shim **ALL64325** 1/8" Shim

Bump Stop Components For Bilstein Shocks

Many bump stop options are available today. These components are for use with Bilstein shocks.



ALL64275.... Bump Stop Cup Fits The Bilstein

Rod End

ALL64276.... Rod Guide Protector Puts The Bump Stop Forces Into The Shock Body, Not The Rod Guide

ALL64277 Splitter Washer Used To Separate Stops On Stacked Stop



www.allstarperformance.com



Roller Skate Wheel Bump Stops

Poly bump stops are 1" tall with a 5/8" diameter hole.

ALL64510 50 Durometer **ALL64511** 55 Durometer **ALL64512** 60 Durometer **ALL64514** 70 Durometer

Adjustable Poly Bump Stop Kit

ALL64505

Polyurethane bump stop is weather resistant and easily adjustable by adding packers to the inner ring. Five 1/16" thick packer shims included in the kit.



Shock Bump Rubbers

Conical bump rubbers fit on most shock shafts up to 16mm to limit shock travel. Bump rubbers are 2-3/8" tall and have a 2" O.D. base. A letter designation is molded in the bottom to identify compound.

ALL64500..... Soft (40 grams) **ALL64501**..... Medium (50 grams)

ALL64502 Hard (55 grams)



Bump Spring Cups

Lightweight bump spring cups are made from 6061-T6 aluminum and have a black anodized finish. Cups feature a bronze bushing, allowing the shock shaft to move freely during suspension travel. Cups have a 2" O.D. sized for Hypercoil and most Landrum bump springs. Two are required and should closely match bump spring I.D. size to appropriate bump spring cup step O.D. size from chart. Sold each.

	Cup Step OD "B"					
Shaft Sz. "A"	1.160"	1.200"	1.280"			
14mm	ALL64348	ALL64349	ALL64350			
1/2"	ALL64352	ALL64353	ALL64354			
16mm, 5/8"	ALL64356	ALL64357	ALL64358			

Digital Bump Stop Gap Tool ALL96412

This tool allows you to measure the gap in your bump set up with your car on the ground. Slide over the shock shaft and adjust between the shock end cap and your bump rubber or shim. Also works well in the shop when setting up multiple combinations with the same gap. For use in non-coilover applications.



Shock Shims

Uniquely designed shock shims are placed directly onto the shock shaft to simplify fine tuning of the chassis without disassembling the shock or even removing the shock from the chassis. Kits include a variety of shim designs and sizes for convenient tuning and set-up.

Size	Starter Kit	Standard Kit	Deluxe Kit
14mm	ALL64400	ALL64402	ALL64404
16mm	ALL64440	ALL64442	ALL64444

Starter Kit

Includes: U-Shaped Shims 1/16" (4 pcs), 1/8" (4 pcs) and 3/8" (2 pcs); Semi-Solid Shims 1/16" (4 pcs) and 1/8" (4 pcs).

Standard Kit

Includes: U-Shaped Shims 1/16" (12 pcs), 1/8" (12 pcs) and 3/8" (6 pcs); Semi-Solid Shims 1/16" (12 pcs) and 1/8" (12 pcs); 2-Piece Collar Shims 1/2" (2 pcs), 3/4" (2 pcs) and 1" (2 pcs); Storage Case.

Deluxe Kit

Includes: U-Shaped Shims 1/16" (12 pcs), 1/8" (24 pcs) and 3/8" (10 pcs); Semi-Solid Shims 1/16" (12 pcs) and 1/8" (24 pcs); 2-Piece Collar Shims 1/2" (6 pcs), 3/4" (6 pcs) and 1" (6 pcs); Storage Case.

Shock Shim Components

U-Shaped Shims - Designed for quick removal and installation into tight stacks and locations where twisting the shim into the stack is not an option or when the car is on the ground. Commonly used for fine tuning the suspension.



ALL64416

Semi-Solid Shims - Designed for quick removal, providing a secure installation that will not fall out yet requires 3/4" of space to install or remove. Typically installed when the vehicle is off the ground. Commonly used for fine tuning the suspension. **2-Piece Collar Shims -** Designed to attach around the shaft of the shock and secure in place with a zip tie. Commonly used during initial



set-up or to take up a large amount of travel. 2-Pack 10-Pack 25-Pack Description 14mm (.550") ALL64410 ALL64410-25 U-Shaped Shim 1/16" U-Shaped Shim 1/8" ALL64412 ALL64412-25 U-Shaped Shim 3/8" ALL64414 ALL64414-25 Semi-Solid Shim 1/16" ALL64416 ALL64416-25 Semi-Solid Shim 1/8" ALL64418 ALL64418-25 2-Piece Collar Shim Kit 1/2" ALL64420 ALL64420-10 2-Piece Collar Shim Kit 3/4" **ALL64422** ALL64422-10 2-Piece Collar Shim Kit 1" ALL64424 ALL64424-10 16mm (.630") U-Shaped Shim 1/16" ALL64450 ALL64450-25 U-Shaped Shim 1/8" ALL64452 ALL64452-25 ALL64454-25 U-Shaped Shim 3/8" ALL64454 ALL64456 ALL64456-25 Semi-Solid Shim 1/16" Semi-Solid Shim 1/8" ALL64458 ALL64458-25 **ALL64460** 2-Piece Collar Shim Kit 1/2" ALL64460-10 ALL64462-10 2-Piece Collar Shim Kit 3/4" ALL64462 2-Piece Collar Shim Kit 1" ALL64464 ALL64464-10



2.5" Coil-Over Kits

Kits include everything to assemble one complete shock. Slotted tops allow guick and easy spring changes. Kits are for 2-1/2" coilover springs and are designed for use with 2" steel bodied shocks unless specified.



Shock	Kit Number	Replacement Top	Replacement 5" Sleeve	Replacement 7" Sleeve	Replacement Adjuster Nut
AFCO			J	, ,,,,,,,	,
Kit With 7" Sleeve	ALL64141	ALL64170	ALL64160	ALL64161	ALL64180
Bilstein					
Kit With 7" Sleeve	ALL64143	ALL64171	ALL64162	ALL64163	ALL64180
Fox					
Kit With 7" Sleeve	ALL64130	ALL64177	-	ALL64164	ALL64180
Integra					
(Avenger) Kit With 7" Sleeve	ALL64158	-	_	-	ALL64180
Kit For Aluminum Threaded Body	ALL64157	-	_	-	-
JRI					
Kit With 7" Sleeve	ALL64136	ALL64178	-	ALL64169	ALL64180
Koni					
Kit With 5" Sleeve	ALL64146	ALL64173	ALL64162	ALL64163	ALL64180
Kit With 7" Sleeve	ALL64147	ALL64173	ALL64162	ALL64163	ALL64180
Penske					
Kit With 7" Sleeve	ALL64149	ALL64174	ALL64162	ALL64163	ALL64180
Pro					
Kit With 7" Sleeve	ALL64151	ALL64175	-	ALL64165	ALL64180
QA1			•		
(50 Series) Kit With 7" Sleeve	ALL64145	ALL64172	-	ALL64165	ALL64180
Kit For Aluminum Smooth Body w/7" Sleeve	ALL64154	ALL64172	_	ALL64167	ALL64180

Related Products

ALL64182 2-1/5" C/O Diaper Pin ALL64183 Snap Ring Flat (Koni) ALL64184 Snap Ring Round ALL64186 Snap Ring (Fox)









5" Coil-Over Adapter

ALL64185

Aluminum adapter converts existing coil-over kit from a 2-1/2" spring to a 5" spring. Adapter inner hole I.D. is 2-1/2" to work with most coil-over sleeves. Sold each, two are typically required.



Spring Spacers









Spring spacers can be used with 2-1/2" coil-over springs or with coil-over kits and 5" adapter when extra spacing is needed.

ALL64195 1" Spacer ALL64196 2" Spacer **ALL64197** 3" Spacer

Shock Extensions

Steel extensions fasten directly to shock shaft for added suspension travel. Sold each.

M12-1.0 Thread (Bilstein)

ALL60096.... 1" Extension ALL60097 2" Extension

7/16"-20 Thread (Fox)

ALL60098.... 1" Extension ALL60099 2" Extension

Shock Canister Mounts

At last, a shock canister mount that fits all common shock canisters. Aluminum construction mount is rubber padded to protect shock canister and increase holding strength. Adjustable quick release nylon strap will secure any shock canister from 1-1/2" to 3" in diameter.

ALL64270 1-1/4" Tubing **ALL64269** 1-3/8" Tubing **ALL64271** 1-1/2" Tubing **ALL64272** 1-3/4" Tubing **ALL64273** Flat Panel

Replacement Parts ALL99295 Release Pin ALL99296 Retainer Strap







Spring Pre-Loader

Pre-loader allows use of a softer spring rate that is "pre-loaded" at ride height. The pre-loaded spring will have less rate increase as the suspension travels. For example, a 150 lb./in. spring can be pre-loaded to 400 lbs. at ride height, but still only increases at a rate of 150 lb./in. as suspension travels. The entire unit may also be exchanged with another unit with a different rate spring pre-installed to allow spring rate changes without affecting ride

height. Commonly used on the rear coil-overs, pre-loader requires 3" I.D. spring, includes a thrust bearing set and fits most shocks. Note: Unit is typically installed with slotted inner half towards the shock body. Always check components for possible interference.

ALL64230 Pre-Loader For 10" Tall Spring ALL64232 Pre-Loader For 12" Tall Spring ALL64234 Pre-Loader For 14" Tall Spring ALL64212 Replacement 3" Bearing Set

Related Parts

ALL11187 Pre-Loader Body Wrench **ALL11188** Pre-Loader Nut Wrench



Thrust Bearing Kits

Bearing kits are placed between

the coil spring and the adjuster nut to reduce friction when making adjustments. Kits are recommended for preloaded spring assemblies or when springs require adjustment while they are under pressure. Kits include one bearing and two races.

ALL64210 2.5" Kit (2.5" I.D. x 3.25" O.D.) **ALL64212** 3" Kit (3.025" I.D. x 3.730" O.D.) **ALL64214** 5" Kit (4.150" I.D. x 5.045" O.D.)

Hydraulic 2-1/2" Coil-Over Spring Adjuster

ALL64220

Weight jack assembly allows driver to adjust car handling while driving. Turning the adjustment knob will extend spring cup up to 7/8" to increase or decrease spring pressure.

Assembly includes hydraulic ram, hydraulic pump with adjustment knob, 9' braided hose, and two washers for use with standard or threaded body shocks. Black anodized finish.

Replacement Part

ALL64222 O-Ring Kit For ALL64220

Shock Protectors

Plastic shock protectors slide over aluminum threaded body shock to protect against wear from spring. Protector measures 6" from spring seat to end, has an I.D. that measures 2-1/4" and works with all 2-1/2" I.D. springs. Unit should just cover shock body and may need to be cut to specific length.

ALL64200.... Blue **ALL64201**.... Black

Shock Protectors

Shock Protectors add extra protection from rocks and debris to your shock body. Plastic protector simply snaps onto your shock body. May need to be cut to length. Sold each.

ALL64202 2" Standard Body Shocks ALL64203 1-5/8" Small Body Shocks

Shock Shaft Boot ALL64198

Rubber bellows style boot is 10" long, one end has an 1-1/4" opening while the other is 2". Boot fits most non-coil-over shocks.

Shock And Pull Bar Covers

Neoprene covers help protect from rock damage and to keep components clean while preventing the competition from knowing your secrets. Hook-and-loop material allows easy cover removal for adjustments. 3" covers are often used for 2-1/2" and 3" coil-over shocks and small diameter upper links. 6" covers work well on 5" springs and pull bar applications.

ALL64204 3" x 14" ALL64205 3" x 16" ALL64206 6" x 7" ALL64207 6" x 14" ALL64208 6" x 16" ALL64209 6" x 20"

Coil-Over Eliminator

ALL64100

Eliminator fits conventional 5" coil springs. Adjuster locks spring into place. Kit includes a threaded shaft, two spring plates, one adjuster, two rod ends and two jam nuts. Easily adjusted with ALL11146 wrench. Not to be used as a suspension limiting device, check maximum travel before use.





Weld-On Shock Brackets

Weld-on shock brackets mount standard and coil-over shocks with 1/2" I.D. inner bushing or 1/2" rod end to chassis as well as many other uses. 1/8" thick mild steel brackets include 1/2" bolt, spacer and locknut.

Notched Tube Mount

Bracket is notched for 1-1/2" - 1-3/4" round tubing to create a gusset style mount that welds on three sides. Notched design positions the bracket perpendicular to the tubing at a 90° angle for straight mount and approximately a 75° angle for angled mounts.

Straight Mount









ALL60103 Short ALL60104 Long

ALL60112 Long Two Position ALL60113 Extra Long Three Position

Angle Mount







ALL60100 Left Hand ALL60101 Right Hand

Round Tube Mount

Bracket welds parallel onto tubing. Typically mounted above or below tubing and includes 1/2" shock mounting hardware. Mounting positions are on 1" centers.

ALL60107 One Position ALL60114 Two Position ALL60115 Three Position







Flat Mount ALL60106

Bracket mounts to a flat surface or square tubing.

ALL99101 Bushing only





Shock Spacers

Steel spacers have a 1/2" I.D. and 3/4" O.D. and can be used in a variety of other locations.

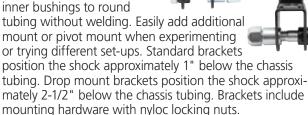


		Length	2-Pack	10-Pack	25-Pack
		1/4"	ALL64280	ALL64280-10	ALL64280-25
Shock Bracket Replacement Parts		1/2"	ALL64282	ALL64282-10	ALL64282-25
Shock bracket replacement raits	ACTOR IN	5/8"	ALL64283	ALL64283-10	ALL64283-25
ALL99100 Bolt, locknut, and bushing		3/4"	ALL64284	ALL64284-10	ALL64284-25
ALLY 100 Doit, lockildt, and busining	201				



Clamp-On Shock Brackets

Clamp-on shock brackets mount standard and coilover shocks with 1/2" I.D. inner bushings to round



Clamp-On	
ALL60220	1-3/4"
ALL60221	1-1/2"
ALL60222	1-1/4"

Drop Mount Cl	amp-On
ALL60224	1-3/4"
ALL60225	1-1/2"

Upper Coil-Over Shock Mount Kit

ALL60230

Weld-in kit provides a mounting point for rear coil-over shock mounts in tube, boxed or stock frames with up to 48" between frame rails. Great for drag racing and street



applications, kit includes a 48" long, .120" wall x 1-1/2" mild steel tube, reinforced mounting tabs, 2" x 3" end plates and 1/2" hardware.

1/2" Rod End Mount ALL60073

3/16" thick steel mount with 1/2" holes accepts rod ends up to 5/8" wide. Mount is 1-5/8" tall overall.

Track Bar Locator Brackets

Track bar locator brackets are an ideal bolt-on mounting point for rod ends commonly found on Panhard bars, track bars or rear axle housing track locators. For use with 1/2" diameter rod ends. Available with a 5/8" or 3/4" bracket mounting hole.

ALL60079 5/8" Hole, 1" Gap **ALL60089** 3/4" Hole, 1-3/16" Gap

Smart Tool ALL10113

Ensure that chassis tubing is level and plumb when building roll cages or checking driveshaft



angles. Also works on trailing arms and suspension tubes when used with ALL10740 Smart Tool Tray. A "hold" button freezes and unfreezes readings which can be displayed as degrees, percentages, or in./ft. at the push of a button. Plus and minus signs indicate when pitch is more or less than that shown on the display. Pitch reads in 1/8 in./ft. increments. Level emits a "beep" at level and plumb. The tool shuts off automatically if idle for more than six minutes. Powered by a standard 9 volt battery.

Steel Shock Quick Pin ALL60108

Steel shock quick pins allow coil-over shocks to be quickly serviced or changed. Works with Allstar coil-over brackets, eliminating the need for a separate bushing. Shock quick pins are 2-1/2" long and include a hairpin. Sold each.

Titanium Shock Quick Pins

Titanium shock quick pins allow coil-over shocks to be quickly serviced or changed.

ALL17120 has a long shoulder and will work with Allstar coil-over brackets, eliminating the need for a separate bushing. ALL17121 is commonly used on non-bushing type brackets, but can be used with Allstar brackets along with bushing. Shock quick pins are 2-1/2" long and include a hairpin.

ALL17120...... Quick Pin With Shoulder **ALL17121**...... Quick Pin Without Shoulder

Quick Release T-Handle Pins

Positive lock quick release pins hold tightly in place until the handle button is depressed, allowing the pin to be inserted



or removed into or out of a hole with ease. Handles are made from 380 die cast aluminum, shanks are made from 4130 steel. Each pin is equipped with a stainless steel split ring, allowing the option to attach a cable assembly.

ALL60300 1/4" x 1"	ALL60314 3/8" x 3"
ALL60301 1/4" x 1-1/2"	ALL60318 1/2" x 2"
ALL60302 1/4" x 2"	ALL60320 1/2" x 2-1/2"
ALL60304 5/16" x 1"	ALL60322 1/2" x 3"
ALL60306 5/16" x 2"	ALL60324 1/2" x 3-1/2"
ALL60308 5/16" x 3"	ALL60326 5/8" x 2"
ALL60310 3/8" x 1"	ALL60328 5/8" x 2-1/2"
ALL60312 3/8" x 2"	ALL60330 5/8" x 3"

Quick Pin Lock Collar

Steel lock collar provides a positive lock for quick release pins. Black coated collar with button head machine screw allows attachment of a securing





device, like an Allstar lanyard (ALL18461 or ALL18463).

ALL60335 1/2" Collar With 10-32 Screw **ALL60336** 5/8" Collar With 1/4"-28 Screw



Panhard Bars

Panhard bars are formed

from 1.250" tubing with 3/4"-16 threads in each end. For use with 3/4" RH rod ends and clamp-on brackets (ALL60180 or ALL60181). Centerto-center length reference is figured including rod ends. Rod ends sold separately.

ALL56146 29" Center-To-Center ALL56147 30-1/2" Center-To-Center ALL56148 32-3/4" Center-To-Center

Cut-To-Fit J-Bar Style Panhard Bars

Cut-to-fit bar is an unwelded kit that allows building a custom length J-Bar with up to a 27" long center-to-center distance, enough to work with most chassis. Bar is formed from .250" wall, 1-1/2" diameter steel tubing, has a 4" drop, includes a threaded insert and rod ends.

ALL56141 Bar With Standard Rod Ends ALL56142 Bar With Aircraft Rod Ends **ALL56143** Replacement 3/4"-16 Insert

Standard Rod End

Aircraft Rod End

Adjustable J-Bar Style Panhard Bars

Bars are formed from 1-1/2" steel tubing and mount to the pinion rather than the axle tube to maintain adequate driveshaft clearance. J-bars have 3/4" rods ends and allow up to 2" of adjustment.

Part No.	Drop	Description
ALL56155	4"	17-1/2"-19-1/2", 6.2 Lbs.
ALL56156	4"	19-1/2"-21-1/2", 6.2 Lbs.
ALL56153	6"	17-1/2"-19-1/2", 6.7 Lbs.
ALL56154	6"	19-1/2"-21-1/2", 7.0 Lbs.

Replacement Parts

ALL99050 Replacement Threaded Adjuster

ALL99052 Adjuster Nut

ALL58072 3/4" Male Molv Rod End

Heavy Duty 3/4" **Chrome Moly Rod Ends**

Heavy duty or often referred to as "Aircraft Style", these 4130 chrome moly rod ends have larger bodies, making them thirty percent stronger than standard 3/4" rod ends. These rod ends are commonly ALL99314 ALL99315 used on Panhard bars and lower strut rods.

ALL99314 RH Male. 3/4" x 3/4"-16 ALL99315 RH Female, 3/4" x 3/4"-16

Panhard Bar/Third Link Brackets

Brackets have a built-in arch for adjustment of the Panhard bar or third link angle without changing the length of the arm. Brackets are 1/8" thick. Sold as a pair.

ALL60162...6-Hole Brackets With 1/2" Holes **ALL60163**..6-Hole Brackets With 5/8" Holes **ALL60165**.. 6-Hole Brackets With 3/4" Holes ALL60167...5-Hole Brackets With 3/4" Holes



ALL60162 ALL60167 ALL60163 ALL60165

ALL60240

ALL60245

Clamp-On **Panhard Bar Brackets**

Adjustable steel or aluminum brackets clamp to square tubing, providing multiple Panhard bar mounting locations. Brackets are tapped for 3/4"-10 bolts. Steel brackets have outer holes 5" apart. Aluminum brackets have outer holes 5.5" apart. Hole measurements are center-to-center.

Steel Brackets

ALL60240 For 2" x 2" Tubing ALL60244 For 1-1/2" x 1-1/2" Tubing

Aluminum Brackets

ALL60243 Straight, 2.5 Lbs., For 2" x 2" Tubing ALL60245 Angled, 2.0 Lbs., For 2" x 2" Tubing

Mini Panhard Bar Clevis

Aluminum clevis clamps to mini sprint and midget chassis providing an adjustable mounting point for a panhard bar. Clevis includes 3/8"



mounting hardware with a reducer bushing for mounting panhard bars with 1/2" rod ends.

ALL60232 1-1/8" I.D. ALL60233 1-1/4" I.D.

Panhard Bar Clevis

Black anodized aluminum clevis clamps around a chassis tube and connects to the 3/4" rod end on the long



end of a J-bar style Panhard bar. After loosening the two Allen bolts, the clamp may be slid up or down on the chassis tube to adjust the bar and change roll center.

ALL60182 1-1/2" I.D. ALL60183 1-3/4" I.D.



Ryan King

ALLSTAR' PERFORMANCE

Remote Adjustable Panhard Bar Mounts

Easily adjusted on frame side of Panhard bar, mount has a threaded shaft and fastens to 1-3/4" diameter tubing. Standard mount kit has 2" of adjustment, drop mount kit has 5" of adjustment. Each turn of the shaft moves mount .100".

Extension rod may be mounted in rear window or decking for quick, easy adjustments from outside of the car. Mounting hardware and a 3/4" Panhard bar bolt are included.

ALL60270 Standard Mount Kit ALL60273 Drop Mount Kit

Replacement Items:

ALL60272 Extension Rod With Bushing

ALL60274 Flange Bushing

Internal Screw Style Panhard Bar Adjusters ALL56152

A screw bolt style adjuster is welded inside of the tube. When welded in place of current mount, Panhard bar can be easily adjusted by turning the screw bolt. Attach Panhard bar to this adjuster with ALL60183 Clevis (not included). Rear Panhard mount, 21" tall with 3" of Adjustment.



Steel climbing style adjuster mounts to chassis square tubing and permits Panhard/J-bar adjustment without removing or realigning spacers or tabs found on other mounts. Radiused slot eliminates the need to re-square the rear end after adjustments.

ALL60238 For 1-1/2" Tubing, Inside and Outside Mounting

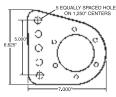
ALL60239 For 2" Tubing, Inside and Outside Mounting

Climbing Style Frame Mount Panhard Bar Bracket ALL60247

Easily adjust your Panhard bar with only one wrench! Climbing style adjuster allows any amount of adjustment without having to remove or realign any spacer/tabs. Radiused slot so you don't have to resquare the rear end after adjustments. Aluminum bracket fits 2" x 2" tubing, center/inside mounting.

Quick Change 5-Hole Panhard Bar Bracket ALL60170

Bracket mounts to all standard quick change rear ends with six bolts. Made of 1/2" thick steel, bracket has five 3/4" Panhard





bar mounting holes for up to 5" of adjustment.

Quick Change Panhard Bar Bracket

ALL60275

ALI 60270

ALL60273

ALI 60239

Replaces the front seal plate/bearing retainer on most quick changes to add 4" of adjustment. Includes yoke seal, O-ring, spacers and 3/4" lock nut.

Replacement Parts

ALL99112 Stud

ALL99113 Large Spacer ALL99114 Small Spacer

ALL99115 O-Ring



ALL60285

ALL60287

Quick Change Panhard Bar Bracket

ALL60280

Bracket has arched, serrated slots for easy adjustment. Designed by Scott Bloomquist.

Replacement Part

ALL60282 Replacement Bolt And Spacers

Quick Change Pinion Mount Panhard Bar Brackets

Pinion mounted brackets have a cam style adjuster for quick and easy setup of the Panhard or J-bar. Single cam adjuster features a cog style adjuster nut and threaded back nut that slides with adjuster for easy single wrench adjustment. Double cam adjuster has cog style front and rear adjusters that are keyed together for smooth adjustments. Aluminum mounts replace the front pinion plate on most quick change rear ends and the steel mount is used with

the original pinion plate. Radiused mounting slots eliminate the need to adjust J-bar or Panhard bar length.

ALL60285 Aluminum Bracket, Single Sided, Single Cam **ALL60286** Aluminum Bracket, Double Sided, Single Cam

ALL60287 Single Sided Steel, Double Cam*

ALL60288 Aluminum Bracket, Single Sided, Double Cam

*Steel bracket designed for use with original or factory pinion plate



Climbing Pinion Cover Plate Kit ALL72078

Kit includes a 2-piece cover and mounting hardware to reduce mud build-up in the machined pocket area of Allstar aluminum pinion mount Panhard bar brackets.



Quick Change Bracket

ALL60181

Clamp-on bracket mounts on left side tube of quick change to connect Panhard bar. Change roll center height by loosening clamp and pivoting bracket up or down. Measures 11-3/4" from housing to end of bracket, 3/4"-16 threads. Grade 5 hardware with Nyloc nuts included.

Ford 9" Panhard Bar Bracket

ALL60180

Bracket connects Panhard bar to Ford 9" axle housing with 3" O.D. axle tubes. Roll center height can be changed by loosening clamp and pivoting bracket up or down. Measures 7-3/4" from housing to end of bracket, 3/4"-16 threads. Grade 5 hardware with Nyloc nuts included.

Ford 9" Panhard Bar **Bracket ALL60176**

Ford center section bracket is 1/2" thick steel with four 3/4"-16 mounting holes to provide 3-3/8" of adjustment.



Adjustable Panhard Bar Mounting Bracket ALL60185

Bracket welds onto the rear of a 3" steel axle tube to mount a Panhard bar behind the axle housing. A machined 6" slot with a sliding retainer nut makes it possible to change roll center by adjusting Panhard bar angle with only one wrench. Bracket includes a 3" x 3/4"-10 bolt, two 5/16" wide spacers and a flat washer.

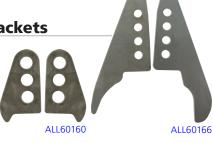
Ford 9" Upper Link **Brackets ALL60157**

Brackets are designed to weld to most Ford 9" style center sections. Steel brackets are 3/16" thick and provide multiple mounting locations for 90/10 shock, upper link, third link or pull bar. Sold as a set.



Ford 9" **Upper Link Brackets**

Ford 9" housing brackets provide a mounting point for upper link. Weld-on brackets fit standard steel Ford housings.



ALL60160 1" Dia. Holes, Sold In Pairs **ALL60166** 3/4" Dia. Holes, Set Of 2

ALL60150

Bracket attaches to top of quick change and accepts upper link. Steel bracket has three 3/4" holes, 3" to the rear for forward traction. Sold in pairs.



ALL60156

Bracket attaches to top of most quick change rear end center section. Steel bracket is 3/16" thick and provides multiple mounting locations for 90/10 shock, upper link, third link or pull bar. Sold in pairs.



Upper Link Adjustable Spacer Kit

ALL60178

Kit includes two adjustable spacers to place on each side of your top link, pull bar or third link. Aluminum spacers feature a threaded body that may be



Upper Link Spacer Kits

Kits with multiple spacers allow the top link to be positioned wherever needed between brackets. Spacers have a 3/4" I.D. hole. Kits include bolt, nut and spacers.

ALL60148 Spacer Kit With Steel Spacers **ALL60158** Spacer Kit With Aluminum Spacers

Upper Link Chassis Brackets

Weld-on brackets have curved 3/4" slots to maintain pinion angle as the 3rd link is raised or lowered. Both brackets are notched for 1-3/4" round tubing and are 3/16" thick.





ALL60065..... Short ALL60066..... Long



Third Link Assembly Without Bushings ALL56390

Designed to increase traction to rear tires, third link assembly uses interchangeable polyurethane bush-

ings (sold separately, two required) to absorb energy under acceleration and braking. Bushings can be quickly changed to adjust to changing track conditions. Assembly is 2-1/4" wide x 3" tall and has a 3/4"-16 RH chrome moly stud for attaching a suspension tube. 3/4" I.D. inner steel bushings are stepped to keep link centered in poly bushings. A good starting point is a 70 durometer acceleration bushing and 90 durometer brake bushing.

ALL56391 Half Bushing Green, 50 Durometer ALL56392 Half Bushing Orange, 60 Durometer ALL56393 Half Bushing Yellow, 70 Durometer ALL56394 Half Bushing Blue, 80 Durometer ALL56395 Half Bushing Red, 90 Durometer

Torque Absorber

ALL56165

Steel torque absorber may be used as the upper third

link, right rear trailing arm or Panhard bar to increase traction. Measures 7-1/2" between jam nuts and 10-3/8" end to end. Accepts 3/4" rod ends or suspension tubes.

Replacement Components:

ALL56164 Thru-Bolt ALL56166 Bushings (Each) **ALL56167** End Stud ALL99010 Washer ALL99011 Barrel **ALL99012** End Cap

90/10 Spacer Kits

Kits with multiple spacers allow positioning of the 90/10 shock wherever needed between brackets. Spacers have a .500" I.D. hole. Kits include bolt, nut and spacers.

ALL60149 Spacer Kit With Steel Spacers ALL60159 Spacer Kit With Aluminum Spacers



Todd Sherman

Poly Bushings

Poly bushings are designed for racing and work great in pull bars (torque links) and bump stops. Bushings' progressive rate start softly and quickly "ramp up." Bushings provide excellent performance when loaded, offering good abrasion and solvent resistance. Sold each.

Part No.	Color	Hardness	0.D.	I.D.	Height
ALL56369	Green	50	2.25"	.75"	1.06"
ALL56370	Purple	60	2.25"	.75"	1.06"
ALL56372	Yellow	75	2.25"	.75"	1.06"
ALL56373	Blue	80	2.25"	.75"	1.06"
ALL56374	Red	87	2.25"	.75"	1.06"
ALL56375	Orange	55	3.375"	.75"	2.50"
ALL56376	Yellow	75	3.375"	.75"	2.50"
ALL56378	Blue	80	3.375"	.75"	2.50"
ALL56379	Red	87	3.375"	.75"	2.50"

Bushing Washers

Required between poly bushings when stacking for optimum performance.

ALL99178 Steel Washer For 2-1/4" Bushings ALL99179 Aluminum Washer For 2-1/4" Bushings

Rubber Bushings

Bushings absorb torque from rear end and may also be used as replacement in other applications. Sold each.



ALL56161 3" O.D., 1-1/2" Tall, 5/16" Shoulder ALL56162 3" O.D., 1-1/2" Tall, No Shoulder

Shock And Pull Bar Covers

Neoprene covers help protect from rock damage and keep components clean while preventing the competition from knowing your secrets. Hookand-loop material allows easy cover removal for adjustments. 3" covers are often used for 2.5" and 3" coil-over shocks and small diameter upper links. 6" covers work well on 5" springs and pull bar applications.

ALL64204 3" x 14" **ALL64205**..... 3" x 16" **ALL64206**..... 6" x 7" ALL64207 6" x 14" ALL64208..... 6" x 16" ALL64209..... 6" x 20"



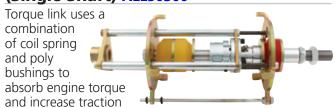


Spring/Bushing Style Pull Bar (Dual Shaft) ALL56368

Torque link uses a coil spring to absorb engine torque and increase traction to rear tires. The dual shaft design

allows engine torque and brake bushings to be adjusted separately. Unit comes with two purple (60 durometer) engine torque bushings and one red (87 durometer) brake bushing. Other bushings are available for additional tuning options. Unit requires a 5" O.D. x 6-5/8" or 7" tall coil spring, sold separately. Unit is 17" long overall and most commonly used with two 3/4"-16 rods ends (1-RH Female and 1-LH Male) and a 3/4" suspension tube. Subtract 20" from center-to-center of the chassis mounting distance to determine required tube length. 9.3 lbs. without spring.

Spring/Bushing Style Pull Bar (Single Shaft) ALL56366



to rear tires. Ideal for the experienced driver and a car with radical suspension travel. Torque link comes standard with two yellow (75 durometer) poly bushings on the engine torque side and a single red (87 durometer) poly brake bushing. Other bushings are available for additional tuning options. Unit requires a 5" O.D. x 6-5/8" or 7" tall coil spring, sold separately. Unit is 16" long overall and most commonly used with two 3/4"-16 rod ends (1-RH Male and 1-LH Male) and a 3/4" suspension tube. Subtract 19" from center-to-center of the chassis mounting distance to determine required tube length. 8.5 lbs. without spring.

Spring Style Pull Bar (Dual Shaft)

ALL56367 Torque link uses a coil spring to absorb engine torque and increase

traction to rear tires. The dual shaft design allows engine torque and brake bushings to be adjusted separately. A single red (87 durometer) poly bushing is included. Other bushings are available for additional tuning options. Unit requires a 5" O.D. x 6-5/8" or 7" tall coil spring, sold separately. Unit is 18-1/2" long overall and most commonly used with two 3/4"-16 rods ends (1-RH Female and 1-LH Male) and a 3/4" suspension tube. Subtract 21-1/2" from center-to-center of the chassis mounting distance to determine required tube length. 8.5 lbs. without spring.

Small Bushing Style Pull Bar (Dual Shaft) ALL56362



reduce diameter (only 3-1/2") for more compact applications and utilizes energy absorbing polyurethane bushings to absorb engine torque and increase traction to rear tires. Pull bar includes three blue (80 durometer) and two red (87 durometer) poly bushing on the engine torque side. This bushing combination works similar to a progressive spring; the softer bushings collapse at a faster rate than the harder bushings until the unit is solely working on the hardest bushing. A single red (87 durometer) poly brake bushing is also included. The dual shaft design allows engine torque and brake bushings to be adjusted separately. Unit is 19" long overall and only weighs 8lbs. Subtract 22" from center to center of the chassis mounting distance to determine required tube length.

Bushing Style Pull Bar (Dual Shaft) ALL56365

Torque link uses energy absorbing polyure-thane bushings to absorb engine

torque and increase traction to rear tires. Includes one blue (80 durometer) and one yellow (75 durometer) poly bushings on the engine torque side and a single red (87 durometer) poly brake bushing. These durometers work well for a majority of racers, especially those running open class mods such as UMP and USMTS cars. Other bushings are available for unlimited tuning options. Unit is 19-1/2" long overall and most commonly used with two 3/4"-16 rod ends (1-RH Female and 1-LH Male) and a 3/4" suspension tube. Subtract 22-1/2" from center to center of the chassis mounting distance to determine required tube length. 11 lbs.

Bushing Style Pull Bar (Single Shaft)

ALL56364

Torque link uses energy absorbing polyurethane bushings to absorb engine torque



and increase traction to rear tires. Includes two blue (80 durometer) poly bushings on the engine torque side and a single red (87 durometer) poly brake bushing. These durometers work well for a majority of racers, especially those running open class mods such as UMP and USMTS cars. Other bushings are available for unlimited tuning options. Unit is 15-1/2" long overall and most commonly used with two 3/4"-16 rod ends (1-RH Male and 1-LH Male) and a 3/4" suspension tube. Subtract 18-1/2" from center-to-center of the chassis mounting distance to determine required tube length. 9.23 lbs.



Steel Suspension Tubes

Swaged D.O.M. tubes are black zinc coated. 3/4" O.D. tubes are .065" thick. 7/8" O.D. tubes are .083" thick. 1" O.D. tubes are .095" thick.

1 U.D. II	ibes are .095 ti	IICK.	
Length	1/2" Thread 3/4" O.D.	5/8" Thread 7/8" O.D.	3/4" Thread 1" O.D.
4"	ALL57052	ALL57152	_
4-1/2"	-	ALL57153	_
5"	ALL57054	ALL57154	ALL57254
5-1/2"	_	ALL57155	-
6"	ALL57056	ALL57156	ALL57256
6-1/2"	_	ALL57157	_
7"	ALL57058	ALL57158	ALL57258
7-1/2"	-	ALL57159	_
8"	ALL57060	ALL57160	ALL57260
9"	ALL57062	ALL57162	ALL57262
10"	ALL57064	ALL57164	ALL57264
11"	ALL57066	ALL57166	ALL57266
11-1/2"	_	ALL57167	_
12"	ALL57068	ALL57168	ALL57268
12-1/2"	_	ALL57169	_
13"	ALL57070	ALL57170	ALL57270
13-1/2"	_	ALL57171	_
14"	ALL57072	ALL57172	ALL57272
14-1/2"	_	ALL57173	_
15"	ALL57074	ALL57174	ALL57274
15-1/2"	_	ALL57175	_
16"	ALL57076	ALL57176	ALL57276
17"	ALL57078	ALL57178	ALL57278
18"	ALL57080	ALL57180	ALL57280
19"	ALL57082	ALL57182	ALL57282
20"	ALL57084	ALL57184	ALL57284
21"	ALL57086	ALL57186	ALL57286
22"	ALL57088	ALL57188	ALL57288
23"	ALL57090	ALL57190	ALL57290
24"	ALL57092	ALL57192	ALL57292
25"	ALL57094	_	ALL57294
26"	ALL57096	-	_
27"	ALL57098	_	_
28"	ALL57099	_	_

Bent Steel Suspension Tubes

Bent tubes work in place of standard suspension tubes for additional clearance around suspension components. Tubes are constructed of .160" wall tubing with 5/8"-18LH threads on the straight 7/8" O.D. steel end and 5/8"-18RH threads on the curved end.

ALL57008 10"	ALL57018 15"
ALL57010 11"	ALL57019 15-1/2"
ALL57012 12"	ALL57020 16"
ALL57013 12-1/2"	ALL57021 16-1/2"
ALL57014 13"	ALL57022 17"
ALL57015 13-1/2"	ALL57024 18"
ALL57016 14"	ALL57026 19"
ALL57017 14-1/2"	ALL57028 20"

Heavy Duty Suspension Tubes



Heavy duty tubes are built from .160" wall 1026 DOM mild steel tubing for increased durability over standard steel suspension tubes and feature RH and LH threaded ends with a black powder coated finish.

Length	5/8"-18 Thread 7/8" O.D.	3/4"-16 Thread 1" O.D.	Length	5/8"-18 Thread 7/8" O.D.	3/4"-16 Thread 1" O.D.
5"	ALL57344	ALL57444	15-1/2"	ALL57365	_
6"	ALL57346	ALL57446	16"	ALL57366	ALL57466
7"	ALL57348	ALL57448	16-1/2"	ALL57367	_
8"	ALL57350	ALL57450	17"	ALL57368	ALL57468
9"	ALL57352	ALL57452	18"	ALL57370	ALL57470
10"	ALL57354	ALL57454	19"	ALL57372	ALL57472
11"	ALL57356	ALL57456	20"	ALL57374	ALL57474
12"	ALL57358	ALL57458	21"	ALL57376	ALL57476
12-1/2"	ALL57359	-	22"	ALL57378	ALL57478
13"	ALL57360	ALL57460	22-1/2"	_	_
13-1/2"	ALL57361	_	23"	ALL57380	ALL57480
14"	ALL57362	ALL57462	23-1/2"	-	_
14-1/2"	ALL57363	_	24"	ALL57382	ALL57482
15"	ALL57364	ALL57464	25"	ALL57384	ALL57484

Threaded Tubing Ends

Chrome moly 4130 steel tubing ends are ideal for building custom length suspension tubes. Available in RH and LH threads.



Thread		Tube End		
Size	Tubing Size	Insert O.D.	RH Part No.	LH Part No.
10-32	3/8" x .058"	.259"	ALL22500	_
5/16"-24	1/2" x .058"	.384"	ALL22504	-
3/8"-24	5/8" x. 058"	.509"	ALL22508	ALL22509
3/8"-24	3/4" x .058"	.634"	ALL22512	ALL22513
1/2"-20	7/8" x .058"	.759"	ALL22518	ALL22519
1/2"-20	1" x .058"	.884"	ALL22522	ALL22523
1/2"-20	1" x .065"	.870"	ALL22526	ALL22527
1/2"-20	1-1/8" x .058"	1.00"	ALL22530	ALL22531
5/8"-18	1" x .058"	.884"	ALL22534	ALL22535
5/8"-18	1" x .095"	.810"	ALL22538	ALL22539
5/8"-18	1-1/4" x .095"	1.060"	ALL22542	ALL22543†
5/8"-18	1-1/4" x .120"	1.010"	ALL22546	ALL22547 [†]
3/4"-16	1-1/4" x .065"	1.120"	ALL22548	ALL22549†
3/4"-16	1-1/4" x .095"	1.060"	ALL22550	ALL22551 [†]
3/4"-16	1-1/4" x .120"	1.010"	ALL22554	ALL22555†
3/4"-16	1-3/8" x .095"	1.185"	ALL22558	ALL22559†

†Tube end has built-in hex for adjusting.

Smart Tool ALL10113

Ensure that chassis tubing is level and plumb when building roll cages or checking driveshaft angles. Powered by a standard 9 volt battery.





Aluminum Hex Suspension Tubes

Used in steering and suspension systems, hex tubes are easy to



install and easy to adjust. Available in 7/8" hex with 5/8" threads tapped RH and LH, and 1-1/8" hex with 3/4" threads tapped RH and LH, tubes are black anodized for appearance and corrosion resistance. 6061-T6 material.

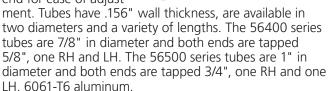
Length	5/8" Thread	3/4" Thread	Length	5/8" Thread	3/4" Thread
3"		ALL56703	21"	ALL56621	ALL56721
4"	_	ALL56704	22"	ALL56622	ALL56722
5"		ALL56705	23"	-	ALL56723
6"	_	ALL56706	24"	_	ALL56724
7"	ALL56607	ALL56707	25"	_	ALL56725
8"	ALL56608	ALL56708	26"	-	ALL56726
9"	ALL56609	ALL56709	27"	_	ALL56727
10"	ALL56610	ALL56710	28"	-	ALL56728
11"	ALL56611	ALL56711	29"	_	ALL56729
12"	ALL56612	ALL56712	30"	-	ALL56730
13"	ALL56613	ALL56713	32"	_	ALL56732
14"	ALL56614	ALL56714	34"	-	ALL56734
15"	ALL56615	ALL56715	36"	_	ALL56736
16"	ALL56616	ALL56716	38"	-	ALL56738
17"	ALL56617	ALL56717	40"	_	ALL56740
18"	ALL56618	ALL56718	42"	-	ALL56742
19"	ALL56619	ALL56719	44"	_	ALL56744
20"	ALL56620	ALL56720			*

Unthreaded 72" Hex Suspension Tubes

ALL56672 72" x 7/8" Hex For 5/8" Rod Ends **ALL56772** 72" x 1-1/8" Hex For 3/4" Rod Ends

Aluminum Suspension Tubes

Clear anodized tubes have a machined wrench flat on one end for ease of adjust-



Length	5/8" Thread	3/4" Thread	Length	5/8" Thread	3/4" Thread
5"	ALL56405	ALL56505	18"	ALL56418	ALL56518
6"	ALL56406	ALL56506	19"	ALL56419	ALL56519
7"	ALL56407	ALL56507	20"	ALL56420	ALL56520
8"	ALL56408	ALL56508	21"	ALL56421	ALL56521
9"	ALL56409	ALL56509	22"	ALL56422	ALL56522
10"	ALL56410	ALL56510	23"	-	ALL56523
11"	ALL56411	ALL56511	24"	-	ALL56524
12"	ALL56412	ALL56512	25"	-	ALL56525
13"	ALL56413	ALL56513	26"	-	ALL56526
14"	ALL56414	ALL56514	27"	-	ALL56527
15"	ALL56415	ALL56515	28"	-	ALL56528
16"	ALL56416	ALL56516	29"	-	ALL56529
17"	ALL56417	ALL56517	30"	-	ALL56530

Unthreaded 72" Suspension Tubes

72" long 6061-T6 aluminum tubes have a .156" wall.

ALL56472 7/8" O.D. Tube For 5/8" Rod Ends **ALL56572** 1" O.D. Tube For 3/4" Rod Ends

Aluminum Suspension Tubes

Swaged 1-1/8" O.D. tubes are built from .156" wall tubing and have 5/8" RH and LH threads.



Lamath	5/8" Thread	5/8" Thread
Length	Black Anodized	Polished Aluminum
10"	ALL56806-10	ALL56807-10
11"	ALL56806-11	ALL56807-11
12"	ALL56806-12	ALL56807-12
12-1/2"	ALL56806-125	ALL56807-125
13"	ALL56806-13	ALL56807-13
13-1/2"	ALL56806-135	ALL56807-135
14"	ALL56806-14	ALL56807-14
14-1/2"	ALL56806-145	ALL56807-145
15"	ALL56806-15	ALL56807-15
16"	ALL56806-16	ALL56807-16
17"	ALL56806-17	ALL56807-17
18"	ALL56806-18	ALL56807-18
18-1/2"	ALL56806-185	ALL56807-185
19"	ALL56806-19	ALL56807-19
19-1/2"	ALL56806-195	ALL56807-195
20"	ALL56806-20	ALL56807-20
20-1/2"	ALL56806-205	ALL56807-205
21"	ALL56806-21	ALL56807-21
21-1/2"	ALL56806-215	ALL56807-215
22"	ALL56806-22	ALL56807-22
22-1/2"	ALL56806-225	ALL56807-225
23"	ALL56806-23	ALL56807-23
23-1/2"	ALL56806-235	ALL56807-235
24"	ALL56806-24	ALL56807-24
24-1/2"	ALL56806-245	ALL56807-245



Shane Clanton



Tyler Bruening



Rod Ends

Two-piece spherical rod ends have a pivoting steel ball and are sold each.



Bore x Thread	RH Male	LH Male	RH Female	Strength				
Standard Serie	Standard Series Steel							
1/4" x 1/4"-28	ALL58004	ALL58014	ALL58034	2,835 Lbs				
5/16" x 5/16"-24	ALL58005	ALL58015	ALL58035	4,517 Lbs				
3/8" x 3/8"-24	ALL58006	ALL58016	ALL58036	6,323 Lbs				
1/2" x 1/2"-20	ALL58008	ALL58018	ALL58038	10,046 Lbs				
5/8" x 5/8"-18	ALL58010	ALL58020	ALL58040	15,488 Lbs				
3/4" x 3/4"-16	ALL58012	ALL58022	ALL58042	15,894 Lbs				
3/4" x 3/4"-16‡	ALL58013*	_	_	15,894 Lbs				
Pro Series Stee	l (Moly) – B	lack						
1/2" x 1/2"-20	ALL58058	ALL58068	_	17,000 Lbs				
1/2" x 5/8"-18	ALL58059	ALL58069	_	19,300 Lbs				
5/8" x 5/8"-18	ALL58060	ALL58070	_	18,000 Lbs				
3/4" x 3/4"-16	ALL58062	ALL58072	_	25,000 Lbs				
Pro Series Stee	l (Moly) – B	lack (PTFE	Lined)					
1/2" x 1/2"-20	ALL58078	ALL58083						
1/2" x 5/8"-18	ALL58079	ALL58084		17,650 Lbs				
5/8" x 5/8"-18	ALL58080	ALL58085		15,200 Lbs				
3/4" x 3/4"-16	ALL58082	ALL58086		21,400 Lbs				
Aluminum – Black								
1/2" x 1/2"-20	ALL58088	ALL58098	_	7,700 Lbs				
1/2" x 5/8"-18	ALL58089	ALL58099	_	15,000 Lbs				

^{*}ALL58013 has an oversized hole and is for use with steering shaft tubing.

Heavy Duty 3/4" Chrome Moly Rod Ends

Heavy duty or often referred to as "Aircraft Style", these 4130 chrome moly rod ends have larger bodies, making them 30%t stronger than standard 3/4" rod ALL99314 ends. These rod ends are commonly used on Panhard bars and lower strut rods.

ALL99314 RH Male, 3/4" x 3/4"-16 **ALL99315** RH Female, 3/4" x 3/4"-16

3/4" Solid Rod End ALL58112

Solid rod ends are built using 1045 steel and are then chrome plated for added wear resistance. End has a body width of 7/8" to match the width of standard rod ends.

Bolt Center Caps ALL10678

Caps slip over the head of standard 1/2" bolts to accurately measure the center-to-center length of installed suspension tube assemblies. Machined step secures the end of a standard tape measure for easy reading of the length to the center of the opposite cap. Caps feature a built-in O-ring that allows the cap to swivel on the bolt head and keeps it from falling off. Package of 2.

Jam Nuts - Standard Hex

Allstar jam nuts have many uses. Great for locking rod ends tightly on suspension tubes or rack and pinion steering units. Package of 4, unless noted.



[†]Sold Each.

ALL99315

Steel Jam Nut Assortments

Assortments contain five each of 1/4"-28, 5/16"-24,

3/8"-24, 7/16"-20, 1/2"-20, 5/8"-18 and 3/4"-16.

ALL18290 35 Asst. RH Jam Nuts **ALL18291** 35 Asst. LH Jam Nuts

Jam Nuts - Small Hex

Specialty jam nuts have smaller outside diameters, allowing smaller wrenches to be used when changing radius rod lengths. Example: with 1/2" bolts the same 3/4" wrench can be used to adjust radius rod or mounting hole locations. Package of 4.

Thread	Wrench			Black
Size	Size	Steel	Alum.	Alum.
5/8"-18 RH	3/4"	ALL18292	ALL18296	ALL18286
5/8"-18 LH	3/4"	ALL18293	ALL18297	ALL18287
3/4"-16 RH	15/16"	ALL18294	ALL18298	ALL18288
3/4"-16 LH	15/16"	ALL18295	ALL18299	ALL18289

Mono Ball Bearings

Mono balls are commonly used in fabrication of products including J-bars, control arms and trailing arms. Bearings have an external grease ring and orifice which allows the bearing to be installed in custom applications that can be externally lubricated.

ALL58001 5/8" **ALL58002** 3/4"



[‡]Commonly used with UBM35-1107, 3/4"-10 jack bolt.



High Misalignment Reducer Spacers

Dual purpose spacers reduce fastener size mounting hole and allow the rod end to rotate more than 30° in each direction, which is 25% more than most standard spacers. Stainless steel spacers resist rust and corrosion. Package of 2.



Rod End		O.D.	Length	Overall	
Size	I.D.	"A"	"B"	Width "C"	Part No.
5/8"	1/2"	.750"	.465"	1.68"	ALL18785
3/4"	1/2"	.890"	.475"	1.825"	ALL18786
3/4"	5/8"	.890"	.475"	1.825"	ALL18787

5/8" Rod End Reducer Spacers

Reducer spacers fit into 5/8" rod ends. reducing the hole size for 1/2" hardware while also spacing the rod end away from chassis brackets. Standard





ALI 18615

spacers are 3/4" O.D. and flanged spacers have 1" O.D. flanges to help support rod end. Size referenced indicates the amount of space between rod end pivot ball and chassis bracket. Package of 2.

Standard Spacers

ALL18615...... Aluminum, 1/2" ALL18617 Aluminum, 1" ALL18618...... Aluminum, 1-1/4" ALL18619...... Aluminum, 1-3/4"



Flanged Spacers

ALL18611 Aluminum, 1/4" ALL18613...... Aluminum, 1/2" ALL18610 Steel, 1/4" ALL18612..... Steel. 1/2"



Rod End Reducer Bushings

Steel bushings reduce the rod end pivot ball I.D. to accept a smaller bolt size.



O.D. To I.D.	2-Pack	10-Pack
1/2" To 3/8"	ALL18565	ALL18565-10
5/8" To 1/2"	ALL18566	ALL18566-10
3/4" To 1/2"	ALL18567	ALL18567-10
3/4" To 5/8"	Δ1118568	ALI 18568-10

Shock Spacers

Steel spacers have a 1/2" I.D. and 3/4" O.D. and can be used in a variety of other locations.



Length	2-Pack	10-Pack	25-Pack
1/4"	ALL64280	ALL64280-10	ALL64280-25
1/2"	ALL64282	ALL64282-10	ALL64282-25
5/8"	ALL64283	ALL64283-10	ALL64283-25
3/4"	Δ1164284	Δ1164284-10	Δ1164284-25

Aluminum Flat Spacers

Flat spacers are great for shimming and adding additional clearance to brackets for brake calipers, power steering, alternators, dry sump pumps or just about anything to help with alignment issues. Package of 2.

Length	3/8" I.D. (11/16" O.D.)	1/2" I.D. (1" O.D.)
1/8"	ALL18740	ALL18760
1/4"	ALL18742	ALL18762
3/8"	ALL18744	ALL18764
1/2"	ALL18746	ALL18766

Tapered Spacers

Universal spacers have many uses including spacing rod ends on linkages to prevent binding or just to provide clearance. Spacers provide a finished look when fitting body panels or spacing components away from floors and firewalls. Package of 2.

I.D.	Small O.D.	Large O.D.	Length	Steel	Aluminum
1/4"	.345	.500	1/4"	_	ALL18700
			1/2"	_	ALL18702
5/16"	.475	.625	1/4"	_	ALL18706
			1/2"	_	ALL18708
3/8"	.525	.680	1/4"	_	ALL18712
			1/2"	_	ALL18714
			1"	_	ALL18716
1/2"			1/4"	ALL18570	ALL18590
			3/8"	ALL18571	_
	.740	.995	1/2"	ALL18572	ALL18592
			3/4"	ALL18574	ALL18594
			1"	ALL18576	ALL18596
			1-1/2"	ALL18578	ALL18595
	.825	.995	1/4"	ALL18580	ALL18597
			1/2"	ALL18582	ALL18598
5/8"			3/4"	ALL18584	ALL18599
			1"	ALL18586	_
			1-1/2"	ALL18585	_
3/4"	.950	1.125	1/2"	ALL18587	_
			3/4"	ALL18588	_
			1"	ALL18589	_

GM Trailing Arm Rod End Reducer Bushings

Reducer bushings are used with spherical rod ends to take the place of the OE style trailing arm bushing when building custom or adjustable lower trailing arms on popular GM cars. Bushing size listed is for size of rod end being used and both bushings accept 1/2" mounting hardware.



ALL18790 5/8" **ALL18792**..... 3/4"





6th Coil Assembly ALL64315

6th Coil Assembly Unit bolts in the center of the chassis to 1-1/2" tubing and the bottom connects to the front of a lift bar using the supplied 18" long chain which accepts 3/8" hardware, can be easily cut to required length. Accepts a 4" tall by 2-1/2" I.D. coil over spring (sold separately).



Steel Birdcages With Roller Bearings



Steel birdcages are compatible with many types of race-

shear radius rod mounting brackets for increased strength

and reduced flexing. Maintenance free sealed roller bearings provide smooth action through entire suspension range. Kits have multiple shock mounting locations with swivel and solid mounts and also include high mis-alignment bushings which allow additional radius rod travel to help prevent binding under severe angles. Use with

ALL99330 Shock Bracket With Swivel Clevis Mount And Spacers

ALL99334 Shock Bracket With Stud Mount And Spacers

cars using four link rear suspension and feature double

5th Coil Mount ALL60218

1-1/2" aluminum bracket bolts in the center of the chassis to mount a 5th coil shock assembly.



QC Lift Bar Brackets

Brackets mount to quick change rearends and accept most popular lift bars. Package of 2.



ALL68313 Steel Lowers With 5/8" Hole

ALL68314 Steel Lowers w/ 5/8" Hole (3/4" Drop) ALL68315 Steel Lowers With 3/4" Hole

ALL68315 Steel Lowers With 3/4" Hole ALL68316 Steel Uppers With 5/8" Hole

ALL68317 Aluminum Uppers With 5/8" Hole

ALL68318 Aluminum Uppers With 3/4" Hole

Lift Bar Retainer Clamp ALL68325

Bracket clamps around 3" axle tubes to provide a mounting point for a lift bar support rod. 1" wide bracket has angled tabs with 1/2" holes for mounting a strut rod with 1/2" rod ends.



Birdcage Bearings

machined axle tubes.

Replacement Parts

ALL60404..... LH With 3.008" Bearing **ALL60406**..... RH With 3.008" Bearing

Replacement bearings for Allstar Performance birdcages and many other brands.

ALL99331 Shock Swivel Clevis With Spacers

ALL99332 Shock Clevis Spacers, 1-Pair

ALL72332 Birdcage Bearing 3.008"





Limit Chain Clamp 2-Piece

2-Piece clamp bolts around most 3" O.D. axle tubes providing a lower mounting point for a suspension limit chain. Two piece design features a nylon liner allowing clamp to be installed without removing existing brake brackets and hubs.

ALL68336 Steel ALL68337 Aluminum



Tim McCreadie



1-Piece Limit Chain Clamps

1-Piece bearing style clamp slides over the end of most 3" O.D. axle tubes providing a lower mounting point for a suspension limit chain.



ALL68332 Steel ALL68333 Aluminum

Retainer Clamps, 2-Piece

Retainer clamp bolts around most 3"
O.D. axle tubes to keep birdcages, floater brackets, limit chain clamps in position. 2-piece design allows clamp to be installed without removing existing brake bracket and hub.

ALL68338 Steel ALL68339 Aluminum

Retainer Clamps, 1-Piece

Steel retainer clamp slides over the end of most 3" O.D. axle tubes to keep birdcages,



floater brackets, and limit chain clamps in position. Powder coated black finish.

Part No.	Description	Width	Thickness	Mounting Hardware
ALL68326	Lightweight	1/2"	1/8"	1/4"
ALL68328	Lightweight	5/8"	1/8"	3/8"
ALL68327	Heavy Duty	5/8"	1/4"	3/8"

Clamp-On Rings for 3" Axle Tubes

Clamp-on rings fasten around most 3" axle tubes to use as a starting point for building custom trailing arms, shock and spring mounts and many other uses. Ring are constructed using 3/16" wall material and feature a 2pc design for easy installation and removal.

ALL60144 2-Bolt, 1" Wide **ALL60145** 2-Bolt, 1-3/4" Wide **ALL60146** 2-Bolt, 2" Wide **ALL60147** 4-Bolt, 3" Wide

Axle Tube Bracket ALL68324

Bracket clamps around 3" wide axle tubes to provide a mounting point for a suspension limiter such as a limiting strap or chain. 1" wide bracket has tabs with 1/2" holes.



Coil-Over Load Bolt Assembly

ALL56074

Threaded aluminum bolt is 6" long with 1-1/8"-12 fine threads and is commonly used as an adjustable travel limiter. Also used with ALL56098 threaded sleeve.

ALL56075 Replacement Shock End

Suspension Limiters

Single bushing suspension limiter is commonly used on the chassis LR or RR to limit travel during acceleration "hike up" and control roll steer. Dual bushing limiter is often used on the lift bar to control lift bar travel on deceleration. Bushing design reduces or absorbs shock when suspension is limited and helps reduce tire unloading. Top plate is drilled to attach a 1/2" rod end when used in a shock mount or for attaching to a weight jack bolt with 7/16"-20 internal threads using optional chrome moly stud ALL64304. Clevis has a 3/8" hole for simple attachment to a chain or cable.

ALL64300.... Single Bushing Limiter ALL64302.... Dual Bushing Limiter ALL64346.... Bushing for ALL64300 ALL56372.... Bushing for ALL64302

ALL64305..... Clevis 1/2"-20 Thread w/ 3/8" Hole **ALL64304**..... Chrome Moly Stud w/ Jam Nut 7/16"-20

Limiter Chain Kit

Commonly used to limit rear suspension or lift bar travel. Chain is 18" long and can be easily cut to required length. Shrink sleeve installs over chain, and when heated with a heat gun, shrinks to keep chain in position and prevent chain from binding or catching on itself.

ALL64312 3/16" Diameter Accepts 3/8" Pin or Bolt ALL64314 5/16" Diameter Accepts 1/2" Pin or Bolt

QC Axle Tube Support Brackets

Brackets provide mounting points for a strut rod assembly to help eliminate flex found in quick change rear ends. ALL68320 attache

rear ends. ALL68320 attaches to the side bell bolts on most quick change rear ends. ALL68322 has tabs with 1/2" holes and mounts directly onto a 3" axle tube.

ALL68320 Center Section Mount **ALL68322** Axle Tube Mount



Suspension Tubes See Page 200 ALL68320 ALL68322

ALLSTAR' PERFORMANCE

Center-Pull Birdcage

ALL60410

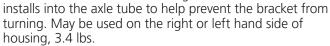
Birdcage clamps around most 3" O.D. machined axle tubes providing a lower mounting point for a suspension. The two-piece design features a nylon liner allowing clamp to be



installed without removing existing brake brackets and hubs. Clamp measures 3-1/4" wide including retaining clamps and accepts a 3/4" suspension tube.

Clamp-On Trailing Arm Bracket ALL60138

Aluminum bracket clamps to a 3" diameter axle tube, has three 3/4"-10 mounting holes for trailing arm location and a 1/2"-13 socket head bolt with two 1/4" spacers for mounting a coil over shock. An additional locking bolt



Clamp-On Trailing Arm Bracket

Steel bracket clamps on 3" axle tube to provide

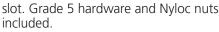


mounts for shock, trailing arm and 5" O.D. coil spring. Grade 5 hardware included.

ALL60140 LH Bracket ALL60141 RH Bracket

Clamp-On Trailing Arm Brackets

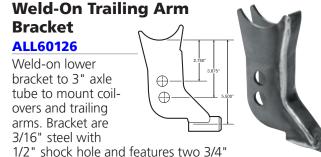
Steel brackets clamp on 3" axle tube for attachment of coil-over shocks and trailing arms. Available with two 3/4" holes or a 2"



ALL60134 Bracket With Two 3/4" Holes **ALL60135** Bracket With 2" Slot

Clamp-On Trailing Arm Bracket ALL60136

Universal bracket mounts coil-over eliminator and shock next to axle and mounts trailing arm 4-1/2" below axle centerline, either inside or outside of bracket. Allows Limited Late Models and Modifieds to be changed from coil-over to coil-over eliminator and shock. Grade 5 hardware and Nyloc nuts included.



Weld-On Trailing Arm/ Shock Brackets

trailing arm holes.

Flame cut 1/2" thick steel brackets weld to 3" diameter axle tube, providing mounting points for trailing arm and shock. Brackets have two 3/4"-10 threaded holes to mount trailing

arm and a 1/2" diameter hole with spacer for mounting a shock.

ALL60110

ALL60110 LH Bracket ALL60111 RH Bracket



Mike McKinney



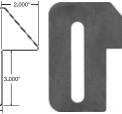
Trailing Arm Brackets

Steel brackets can be used as front mount for leaf spring or trailing arm. Assorted styles are available.

Sold each.

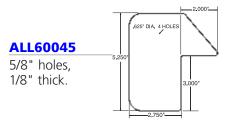
ALL60043

5/8" slot, 3/16" thick, 3-3/4" long.

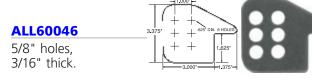


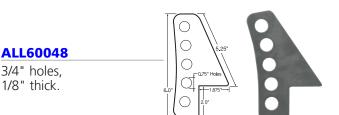








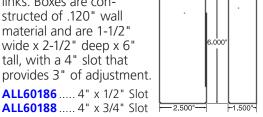


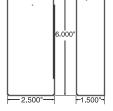


Slider Boxes

Slider boxes weld to the chassis and provide an adjustable mount for trailing arms,

Panhard bars and upper links. Boxes are constructed of .120" wall material and are 1-1/2' wide x 2-1/2" deep x 6" tall, with a 4" slot that provides 3" of adjustment.





Slider Box Quick Adjust Kit

ALL60198

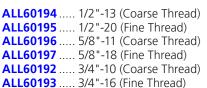
Weld-on kit adds an adjustable feature to standard 3/4" slider boxes. Slider boxes commonly used for

trailing arms, Panhard bars and upper links can now be quickly adjusted with a wrench, socket or possibly a remote adjuster. 3/4"-16 threaded adjuster block features a reference indicator.





T-nuts have slot built in to keep them from turning. No second wrench is needed to tighten or loosen. Use with ALL60186 and ALL60188 slider box. Sold each.



Slider Box Rod End Spacers

Steel spacers are machined to work with ALL60186 and ALL60188 slider boxes fitting between bracket and rod end to properly space rod end and prevent binding. May also be used as standard rod end spacers.







ALL60187 Spacers For 1/2" Slider Box, 2-Pack **ALL60187-10** Spacers For 1/2" Slider Box, 10-Pack **ALL60189** Spacers For 3/4" Slider Box, 2-Pack **ALL60189-10**..... Spacers For 3/4" Slider Box, 10-Pack

Trailing Arm Bracket ALL60042

Weld-on bracket has a curved 3/4" slot so rear end remains square as the trailing arm is raised or lowered. Notched for 2" x 3" square tubing. 1/4" thick.



Swing Arms

Lower rear suspension link with a 3/4" rod

end on one end and threads in the other end to accept a 3/4" RH male rod end. Used on Dirt Late Models and Modifieds.

ALL56052 13-1/2" ALL56053 15-1/2"





GM Metric Trailing Arms

New, stamped steel C-channel arms are strong and sturdy. Improve handling of the rear suspension on 1978-88 GM metric chassis by replacing twisted or worn out rear control arms. Sold each.

ALL57822

ALL57820 Upper, 2.6 Lbs. **ALL57822** Lower, 3.6 Lbs.

Adjustable GM Metric Chassis
Trailing Arms

Adjustable steel 1978-88 G-body Metric upper and lower rear end trailing arms are complete with left and right 3/4" rod ends, step spacers reducing to a 1/2" hole and cut to fit stock GM

type mounts. Upper arm aids in adjusting pinion angle and centering rear end. Lower arm will adjust wheel base.

ALL57824 Upper **ALL57826** Lower

Replacement Parts ALL99320 Clevis End For ALL57824

ALL99321 Rod End Bushings, 2-Pack



ALL57826

GM Trailing Arm Rod End

Reducer bushings are used with spherical rod ends to take the place of the OE style trailing arm bushing when building custom or adjustable lower trailing arms on popular GM cars. Bushing size listed is for size of rod end being used and both bushings accept 1/2" mounting hardware.

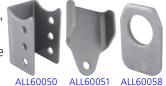


NEW

ALL18790 5/8" **ALL18792** 3/4"

Universal Trailing Arm Brackets

Brackets have three 1/2" mounting holes spaced 1-1/4" apart and may be welded to 3" axle tubes to provide three trailing arm mount locations. ALL60058 is made of 3/16"



steel and welds to the top of the rear end housing, providing an attachment point for upper trailing arms.

ALL60050 Lower Bracket

ALL60051 Shock Bracket For Lower

ALL60058..... Upper Bracket

Metric Upper Trailing Arm Mounts

ALL60059

Mounts weld to the top of Ford 9" housing creating a mounting point for GM Metric chassis upper trailing arms. Bushings not included.



GM Metric Chassis Trailing Arm Bracket Kits

Includes rear upper and lower trailing arm mounts. Upper mount must be cut to desired height depending upon where housing is located in the chassis.



ALL60052 Kit With Single Hole Lower In Stock Location

ALL99282 Brackets Only, 1 Pair

ALL60053 Kit With Single Hole Lower, Lowered To Increase

Traction

ALL99283 Brackets Only, 1-Pair

ALL60054..... Kit With Multi-Hole Lower **ALL99284**..... Brackets Only, 1-Pair

GM Trailing Arm Bushing

ALL56245

Direct replacement, heavy duty polyurethane bushing improves handling and traction. Fits most '65-88 Chevy Chevelle/Malibu, Buick Skylark/GS, Olds Cutlass/442 and Pontiac LeMans/GTO. Accepts 1/2" hardware.

GM Trailing Arm Bushing

ALL56247

GM bushing with an elastomer bearing insert improves handling and traction while eliminating bind. Use with stock trailing arms for race or street. Fits most 1965-88 Chevy Chevelle/Malibu, Buick Skylark/GS, Olds Cutlass/442 and Pontiac LeMans/GTO. Accepts 1/2" hardware.

GM Trailing Arm Bushing With Insert ALL56248

Popular GM bushing features an interchangeable polyurethane insert which can be exchanged to increase or decrease rear steer for maximum traction. Bushing includes a 40 durometer insert. Use with stock or adjustable trailing arms. Fits most 1965-88 Chevy Chevelle/Malibu, Buick Skylark/GS, Olds Cutlass/442 and Pontiac LeMans/GTO. Accepts 1/2" hardware.

Related Parts

ALL99400..... Black Insert 40 Durometer (Soft)
ALL99401..... Yellow Insert 60 Durometer (Medium)
ALL99402..... Red Insert 80 Durometer (Hard)





Bolt-On Spring Cup

NEW

ALL56117

Aluminum cup for 5" spring features a 1/2" mounting hole for use with internal threaded jack bolts, used as a rear lower cup or modified to fit shock shafts.

Lower Spring Cups

Steel spring cup has a 7" wide curved base that welds to the top of a 3" diameter rear end axle tube creating a flat mounting surface for 5" O.D. racing springs Commonly used to replace OE style "pigtail" lower spring mount. Sold each.

ALL56124 Standard Cup ALL56123 Lightweight Cup



ALL56123

Leaf Spring Pad ALL56126

Steel pad welds to 3" diameter rear end axle tube when mounting rear end to most leaf springs. Pad is 2-1/2" W by 5-3/4" L and has a 5/8" center pilot hole. Sold each.

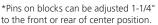
Clamp-On Lower Spring Pad ALL56127

Steel clamp-on leaf spring pad fits 3" diameter axle tubes. Pad measurements are the same as ALL56126. Sold each.

Aluminum Lowering Blocks

Easily adjust ride height on leaf spring cars. Standard and adjustable styles are available in extruded or billet aluminum. Blocks are 2-1/2" W x 5" L. Sold each.

Part No.	Height	Pin Dia.		
Extruded A	luminum			
ALL56130	1"	9/16"		
ALL56131	1-1/2"	9/16"		
ALL56132	2"	9/16"		
ALL56133	2-1/2"	9/16"		
ALL56134	3"	9/16"		
Billet Alum	Billet Aluminum			
ALL56060	3/4"	5/8"		
ALL56061	1"	5/8"		
ALL56062	1-1/2"	5/8"		
ALL56063	2"	5/8"		
ALL56064	2-1/2"	5/8"		
ALL56065	3"	5/8"		
ALL56136*	1-1/2" Adj.	5/8"		
ALL56138*	2-1/2" Adj.	5/8"		



ALL56131 ALL56065 ALL56136

Leaf Spring U-Bolt

ALL68344

Leaf spring u-bolt fits 3" axle tubes, has a 1/2" diameter and is 10" long. Heat treated steel bolt is sold each.

U-Bolt Pads

Universal style u-bolt pads fit 3" diameter axle







ALL60037 ALL60036

tubes and leaf springs up to 2-1/2" wide using 1/2" u-bolt fasteners. Center alignment hole is 5/8" to accept most lowering blocks or spring bolts. 1/4" thick formed steel pads have a gusseted shock mount with a welded bung to accept 1/2" mounting hardware.

ALL60036..... RH Pad **ALL60037**..... LH Pad

ALL60038..... Dual Mount Pad

Leaf Spring Slider Box ALL60034

Leaf spring slider box replaces conventional leaf spring shackles to enable effortless suspension movement and prevent binding. Box may be welded or bolted directly to chassis, and includes two nylon bushings with spring mounting hardware. Fits 2-1/2" wide Chrysler type leaf springs.

Replacement Parts

ALL99055 Bushings, 2-Pack

Leaf Spring Slider Box ALL60035

Replace rear leaf spring shackles with Allstar's leaf spring slider box. Bolt-in slider box with roller bearing design eliminates leaf spring binding, freeing up car. Fits 2-1/2" wide Chrysler type leaf springs.

Leaf Spring Shackles

6-hole brackets for mounting leaf springs are 9" L x 2" W and have 1/2" diameter holes spaced 1" on center. Package of 2.

ALL60055 Steel 1/4" Thick ALL60056 Aluminum 3/8" Thick



ALL60055 ALL60056

Wheelie Bar Wheels

Billet 6061-T6 aluminum wheels are molded with a durable 4" O.D. polyurethane







tire that will not dent or give like a rubber tire. Wheels are available with or without bearings and accept 3/8" mounting hardware. Mounting width: non-bearing wheel is 1-5/8", bearing style wheel is 1-1/4".

Without Bearings (1.625" Wide Mount)

ALL60510 5-Spoke **ALL60512** 5-Hole **ALL60514** 10-Spoke

With Bearings (1.250" Wide Mount)

ALL60511 5-Spoke **ALL60513** 5-Hole **ALL60515** 10-Spoke







Tubing Notcher ALL10411

Notcher works with most standard hole saws to creates a notch on end of round tubing for properly attaching round tubing to round tubing, often used when building roll cages, bumpers or custom chassis.

Notcher features an adjustable holding fixture which automatically centers tubing to create a notch from 90-45 degrees in tubing up to 2". Notcher is commonly clamped into a bench vise or bench mounted and used with a hand drill. Note: Hole saw used should be the size

Replacement Part

ALL10402 5/8"-18 Thread Adapter

of tube accepting notched tube.



Tubing notcher includes a 1/2"-20 arbor thread and 5/8"-18 adapter. Most hole saws up to 1-1/8" diameter use 1/2"-20, larger hole saws use 5/8"-18 thread.

Hole Saw Set ALL10412

Use with tubing notchers. Does not include an arbor for a hand drill. Set includes one of each size: 3/4", 1",1-1/8", 1-1/4", 1-1/2" 1-5/8" and 1-3/4". Hole saws up to 1-1/8" diameter use 1/2"-20 thread, larger hole saws use 5/8"-18 thread.

Individual Hole Saws

ALL10413 3/4"	ALL10417 1-1/2"
ALL10414 1"	ALL10418 1-5/8"
ALL10415 1-1/8"	ALL10419 1-3/4"
ALI10/116 1 1///"	

Note: Hole saws up to 1-1/8" diameter use 1/2"-20 thread, larger hole saws use 5/8"-18 thread.

Digital Levels

Digital level with magnetic base measures the angle of a single straight surface or

the angle of a joint between two straight surfaces. Displayed value on the LCD screen rotates to right side up when digital level is in an upside down position. Powered by three 3V CR2032 batteries (included).



ALL10742..... Compact Digital Level, 2" x 2" x 1" **ALL10744**..... Digital Level, 6" x 2.25" x 1.25"

Punch And Flare Tools

Add strength and a smooth finish to hole edges. Unique tools can be used to punch and flare new holes, or to flare existing holes. Starting with a small center hole, the punch halves bolt together to cut and flare at the same time.







Sample Punch and Flare

Smart Tool ALL10113

Ensure that chassis tubing is level and plumb when building roll cages or checking driveshaft angles. Powered by a standard 9 volt battery.



Level Base ALL10741

Level base simplifies notching and bending of round tubing and helps ensure accuracy. Base fastens to standard ballast or weight brackets and clamps to the tube as a reference point when creating parallel, perpendicular, any angle of opposing notches or bends during fabrication. Base accepts most digital levels including ALL10113,



Digital scale and mounting bracket sold separately.

ALL10742 and ALL10744 or standard bubble levels.

Individual Mounting Brackets

ALL14192... 1" ALL14195... 1-1/2" ALL14193... 1-1/4" ALL14196... 1-5/8" ALL14197... 1-3/4"

ALI 14195

Tin Snips

Durable tin snips have offset blades to keep hands clear of metal while cutting. Non-slip jaws cut through sheet aluminum and up to 18 gauge low carbon steel. Blade length 1-1/4", total tool length 9-1/4".

ALL11030...... Red, Left Hand ALL11031...... Green, Right Hand

Deburring Tool ALL11036

A fast and easy way to remove burrs from the edges of machined or cut metals. Five-piece kit includes handle, telescopic blade holder and three unique blades. Handle has built-in storage for blades. Blade holder adjusts from 1" to 5".

Replacement Part

ALL99328 Replacement Blades 3pk

Body Roller ALL23102

This handy 'highside' body roller will allow you straighten body and deck

panels while still on your car! Must have item for at track repairs.





Body Radius Tool ALL23100

Solid oak tool can be used to flare edges of wheel openings when fabricating fenders and quarter panels out of aluminum. Tool has two different radiuses to create the correct flare for your needs.

Sheet Metal Shrinker Stretcher Combo

Make smooth radius curves and contours with Allstar's shrinker/stretcher combo. Shrinker creates inside curves and stretcher expands for outside curves. Each completely assembled tool includes a handle and mounting hardware for securing to a workbench. Tools are capable of forming 18 gauge mild steel, 16 gauge aluminum and 20 gauge stainless. Kit is great for forming fenders, radiator shrouds, or any item needing a smooth radius curve.

ALL11023...... 1 Base With Two Jaws ALL11024...... 2 Bases With Two Jaws

Spring Steel Drill Bit ALL23115

Specially hardened drill bit is required for drilling spring steel. The 17/64" size simplifies installation of 1/4" hardware. Sold each.

Hammer Type Spring Steel Punch ALL23116

Hammer type punch places a 1/4" diameter hole 1/2" from the end of most 1" x .062" thick spring steel material. Punch features a built-in stop which positions the material for accurate hole placement. Punch needs to be placed on a hard surface (i.e. concrete floor, steel anvil, etc.) and struck lightly with a 3- to 4-lb. hammer.

Replacement Parts

ALL99013 Mandrel For ALL23116

Impact Gun Spring Steel Punch ALL23117

Impact gun style punch places a 1/4" diameter hole 1/2" from the end of most 1" x .062" thick spring steel material. Punch features a built-in stop which positions the material for accurate hole placement. Punch may be placed in a vice or handheld and impact gun driven using a 3/4" socket.

Replacement Parts

ALL99014 Mandrel For ALL23117

ALL99173 Mandrel Bolt ALL99174 Top Plate

43/64" Wheel Stud Drill Bit ALL11045

43/64" bit is correct for drilling hubs or axle flanges to accept most 5/8" wheel studs with .690" knurl diameter. 1/2" shank.

Fabrication Pencils

Pencil works well for marking lines during metal

layout and fabrication.

Multiple uses include marking steel tubing for cutting or notching and marking patterns on painted aluminum or steel sheet metal. Silver reflective marks work best against darker surfaces during cutting or welding for high visibility. Pencil marks are resistant to torch flames and will not burn or rub off.

ALL12064 Pencil, 3-Pack

ALL12066 Mechanical Pencil, With Six Refills

Step Drill Sets

Drill multiple size holes with one bit.
Drill sheet metal and aluminum without deforming or distorting. Bits start on contact, deburr, and chamfer while

drilling, and do not require a center punch. Titanium nitride coated high speed steel. 1/4" shank.

ALL11040 (3-Piece Set)

Drill Bit	Sizes
Six Step	3/16", 1/4", 5/16", 3/8", 7/16", 1/2"
Nine Step	1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4"
	1/8", 5/32", 3/16", 7/32", 1/4", 9/32", 5/16", 11/32", 3/8", 13/32", 7/16", 15/32", 1/2"

ALL11041 (2-Piece Set)

Drill Bit	Sizes	
Eleven Step 1/4", 25/64", 35/64", 11/16", 13/16", 7/8", 1", 1-7/32", 1-1/4", 1-3/8"		
	3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8"	

Double Ended Drill Bits

Double ended bits are basically two bits in one. Convenient bit can be flipped around for a fresh sharp bit when drilling panels for Cleco fasteners or rivets. Package of 6.

ALL18201 1/8" **ALL18204** 3/16"

Drill Bit For Flange Rivets 13/64" ALL18203

A common size bit for working with 3/16" flange type rivets. High speed steel bits have

black oxide finishes and self-centering tips. Flute length: 1-3/16", overall length: 2-1/4". Package of 2.





Cordless Rivet Gun

ALL18212

case.

Quickly set steel and aluminum mandrel rivets anywhere without the need of an air compressor. Kit includes 3/32", 1/8", 5/32" and 3/16" nose pieces, 3-in-1 spanner wrench, (2) 14.4 volt li-ion batteries, charger and plastic carrying

Air Rivet Gun ALL18210

Durable air riveter speeds up assembly and quickly fastens steel or aluminum rivets into various materials. Includes nose pieces for 3/32", 1/8", 5/32" and 3/16" rivets.



Deluxe Air Rivet Gun

ALL18207

Heavy duty air rivet gun can be used with steel or aluminum rivets from 3/32" to 3/16".

Replacement Parts

ALL18209 Jaw Set

ALL99255 Nose Piece Set 3pcs

ALL99256 Mandrel Cup

Hand Rivet Gun

Includes interchangeable nosepieces for 3/32", 1/8", 5/32", and 3/16" diameter rivets.

Rivet Gun Adapter For Cordless Drill ALL18205

Adapter is for reversible cordless drills and greatly speeds up the installation of "blind" rivets commonly used when building race car bodies. Tool is a real hand and time saver compared to hand operated rivet guns and is designed for use with all rivets up to 3/16" including 3/16" aluminum mandrel rivets but not recommended for 3/16" steel mandrel rivets. Adapter includes nosepieces for installing 3/32", 1/8", 5/32" and 3/16" rivets.

Threaded Insert Tool Kit

ALL19450

Tool works with a cordless drill to install a threaded insert into a panel or bracket. Inserts are helpful

when the backside of the panel is not easily accessible. Simply drill the correct size hole, install the threaded insert onto the mandrel, then place the insert into the hole and tighten using any cordless drill. Once the insert is compressed, reverse the drill and remove the mandrel from the insert. Kit includes mandrel and nosepiece for 1/4"-20, 5/16"-18 and 3/8"-16 inserts, other sizes available separately. Threaded inserts sold separately.

Replacement Parts

ALL19452 Mandrel and Nosepiece for 8-32 ALL19453 Mandrel and Nosepiece for 10-24 ALL19454 Mandrel and Nosepiece for 10-32 ALL19455 Mandrel and Nosepiece for 1/4"-20 ALL19456 Mandrel and Nosepiece for 5/16"-18 ALL19457 Mandrel and Nosepiece for 3/8"-16



ALL19454

Threaded Inserts

Steel inserts are helpful when the backside of the panel is not easily accessible. Inserts work great for frequently removed items including gauge panels, switch panels, access panels and body panels or when

mounting items to trailer walls. Inserts are designed for installation using insert tool ALL19450 with coordinating mandrel and nosepiece. Package of 10.



Part No.	Thread Size	Pilot Hole Size	Grip Range	Body Length (Before Comp.)
ALL19460	8-32	17/64"	Up To .080"	.420"
ALL19461	10-24	5/16"	Up To .130"	.475"
ALL19462	10-32	5/16"	Up To .130"	.475"
ALL19463	1/4"-20	13/32"	Up To .165"	.580"
ALL19465	5/16"-18	17/32"	Up To .150"	.690"
ALL19467	3/8"-16	17/32"	Up To .150"	.690"

Cleco Pin Fastener Kits

Cleco pins are reusable and easily make a temporary connection between pieces of sheet metal during fitting. Pins will work with thicknesses up to 1/4", kits include pliers and 10 pins.

ALL18221 Kit With 1/8" Pins **ALL18225** Kit With 3/16" Pins



Unique tool readily installs and removes Cleco fasteners.



ALL19407



Pin Type Cleco Fasteners

Cleco pins permit quick, easy installation and removal of sheet metal during fitting. Pins work with thicknesses up to 1/4".

 1/8" Dia. Pins
 3/16" Dia. Pins

 ALL18222 10-Pack
 ALL18226 10-Pack

 ALL18223 25-Pack
 ALL18227 25-Pack

 ALL18224 100-Pack
 ALL18228 100-Pack

TECH TIP: Drill holes one drill size smaller than the Cleco pin size to assure a tight fit

1/4" Pin Type Cleco Fastener ALL18234

Cleco Pins are temporary fasteners that can easily be installed or removed in 1/4" holes when fitting sheet metal or chassis tabs using the ALL18220 Cleco Pliers. 1/4" size pin is ideal to use in place of body bolts or other 1/4" fasteners. Package of 10.

Clamp Type Cleco Fastener ALL18230

Use when drilling is not an option. Smooth throat prevents paint damage, and spring exerts strong clamping pressure. Throat depth is 1" with a maximum clamping range of 1/2".

Quick Turn Fastener Wrench ALL19400

The Allstar quick turn fastener wrench fits slot head fasteners and reduces the risk of body panel or fastener damage when using screwdrivers for loosening or tightening. Features a non-slip handle.

Quick Turn Spring Adjuster ALL19405

This tool is a must when adjusting tension of quick turn springs. Simply turn knob on adjuster to evenly pull or push spring without kinking or breaking spring.

Transfer Punches

Used to mark quick turn fastener locations, place transfer punch in the initial hole in weld plate or body panel. Position the panel to be marked over top of punch and lightly tap with a hammer.

ALL19402 For 5/16" Fasteners **ALL19403** For 7/16" Fasteners

Taper Reamers

Repair or enlarge tapered holes to accept tie rod ends or ball joints. Reamers may be used in a drill with a 1/2" chuck by removing the T-handle.

ALL11170 Reamer, 7.15°, 1-1/2" Taper Per Ft. **ALL11172** Reamer, 9.56°, 2" Taper Per Ft.

Quick Turn Spring Fixture

Accurately drill panels when installing quick turn fastener springs. Start with a 1/4" center hole and use the fixture to locate and drill 1/8" holes for mounting the springs. Size listed is spring center-to-center distance.

ALL19406 Fixture For 3/4" Spring ALL19407 Fixture For 1" Spring ALL19408 Fixture For 1-3/8" Spring

Spindle Checker Tools

Assure correct alignment of the upper and lower ball joint when checking for bent spindles. Insert slugs into spindle and guide rod will fit through slugs if spindle isn't bent.

Kits fit most aftermarket race and GM stock Metric spindles.

ALL11176 Kit With GM Lower, 2" Taper ALL11177 Kit With Chrysler Lower, 1-1/2" Taper ALL11184 Kit For GM Metric, 2" Taper

Related Parts

ALL99140 GM Lower Slug With Nut (2" Per Ft.)
ALL99141 Chrysler Lower Slug With Nut (1-1/2" Per Ft.)
ALL99158 GM Metric Lower Slug With Nut (2" Per Ft.)
ALL99142 Upper Slug With Nut (1-1/2" Per Ft.)
ALL99159 GM Metric Upper Slug With Nut (2" Per Ft.)

ALL99143 Replacement Guide Rod

Taper Reamer Specifications For Ball Joints

Part No.	Taper Specs	Part No.	Taper Specs
Ball Joint		Ball Joint	
ALL56204	1-1/2" Per Ft.	ALL56217	1-1/2" Per Ft.
ALL56206	2" Per Ft.	ALL56218	2" Per Ft.
ALL56208	2" Per Ft.	ALL56220	2" Per Ft.
ALL56210	1-1/2" Per Ft.	ALL56280	1-1/2" Per Ft.
ALL56212	2" Per Ft.	ALL56284	1-1/2" Per Ft.
ALL56214	1-1/2" Per Ft.	ALL56286	1-1/2" Per Ft.
ALL56216	1-1/2" Per Ft.	_	-

Ball Joint Spreader Tool ALL11174

Tool separates ball joint from the spindle. Inside of cylinder is shaped to fit over tapered stud of most ball joints and presses against stud of other ball joint. Not for use on FWD or 4WD applications. Tool is 4" tall fully collapsed and 6" tall fully extended.

Related Part

ALL11175 1" Extensions (Set of two)

Spindle Slug Tool ALL11182

Tool easily removes spindle slugs that are pressed into fabricated spindles with a standard wrench or socket.



ALL11175





Taps

Tungsten steel taps are titanium coated. Economy taps are available in right-hand and left-hand threads.



ALL11060 1/4"-20 RH	ALL11065 1/2"-20 LH
ALL11061 1/4"-28 RH	ALL11066 5/8"-18 RH
ALL11062 3/8"-16 RH	ALL11067 5/8"-18 LH
ALL11063 3/8"-24 RH	ALL11068 3/4"-16 RH
ALL11064 1/2"-20 RH	ALL11069 3/4"-16 LH

NPT Taps

Alloy steel taps work well for chasing and cleaning threads before installing fittings and plugs.

ALL11056...... 1/8"-27NPT ALL11057...... 1/4"-18NPT ALL11058..... 3/8"-18NPT ALL11059..... 1/2"-14NPT

Thread Files

Remove burrs from damaged or rusted external threads on bolts, spindles, axle tubes,

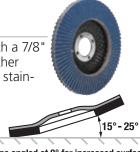
threaded shaft, pipe, and pipe fittings. Choose from three different files, each 8-1/2" long. Standard and metric

ALL11037...... 11-12, 13-14, 16-18, 20-24TPI **ALL11038**...... 9-10, 12-16, 20-27, 28-32TPI **ALL11039**...... 80-1.00, 1.25-1.50, 1.75-2.00, 2.50-3.00mm

Flap Wheel Sanding Discs

Flap discs for 4-1/2" grinders with a 7/8" arbor quickly remove rust and other coatings from a variety of metal, stainless and steel surfaces. Ideal for grinding welds or preparing materials for welding. Sold each.

ALL12121..... 60 Grit **ALL12122**..... 80 Grit **ALL12123**..... 120 Grit



Flaps angled at 8° for increased surface contact and aggressive use.
Best used at 15° - 25° angle.

Emery Cloth Rolls

1" wide emery cloth is perfect for many uses around the shop and trailer including cleaning, deburring and polishing. 150' box.

ALL12130...... 60 Grit **ALL12131**...... 120 Grit **ALL12132**..... 180 Grit

Twist Lock Backing Pad ALL12100

Twist lock backing pad accepts 2" twist lock style cleaning or sanding discs and features a 1/4" arbor to work with most drills or 90° die grinders. Pad is rated up to 30,000 rpm.

Twist Lock Sanding Discs

2" O.D. sanding discs are great for sanding a variety of parts and surfaces. Use with ALL12100 twist lock backing pad (sold separately). Package of 10.

ALL12105...... 60 Grit **ALL12106**...... 80 Grit **ALL12107**..... 120 Grit

Related Part

ALL12100..... Twist Lock Backing Pad For 2" Discs

Twist Lock Cleaning Discs

2" O.D. twist lock discs are great for cleaning gasket material or paint from parts and surfaces. Use with ALL12100 twist lock backing pad (sold sepa-

rately). Package of 5. **ALL12101**..... Coarse **ALL12102**..... Medium

ALL12103..... Fine

Related Part

ALL12100...... Twist Lock Backing Pad For 2" Discs

Safety Wire Twister Pliers

ALL10120

Never lose another race because of loose bolts. Rugged pliers have an end bearing for smoother, faster twisting, especially in tight areas where a second pull is needed.

Safety Wire

Wire is used to mechanically lock pre-drilled fasteners for added security. Type 302/304 stainless steel wire features high corrosion resistance and good tensile strength in applications up to 500 degrees. Sold in a 1lb. spool enclosed in a convenient dispensing container.

ALL10121...... .032" Diameter **ALL11008**..... .041" Diameter

NEW

Safety Wire Drill Fixture **ALL10122**

Accurately drill holes in fasteners, allowing them to be mechanically locked in place with safety wire. Fixture accommodates most 3/16", 1/4", 5/16", 3/8", 7/16", 1/2" and 5/8' socket head and hex head fasteners.

socket head and hex head fasteners. Guide bolt tightens against fastener, holding it secure for drilling. Fixture includes two guide bolts and two 1/16" drill bits conveniently stored within the fixture.

Replacement Part

ALL99102 Replacement Drill Bits, 2-Pack



Dial Indicator With Magnetic Base ALL96414

Dial indicator with magnetic base is a necessity when degreeing a camshaft, checking crankshaft end play, deck heights, dome heights, transmission end play or ring and pinion backlash. Universal magnetic base may be mounted anywhere. Shockproof dial indicator has 1" of travel in .001" increments. Base and dial indicator may also be purchased separately.

ALL96415 Dial Indicator Only ALL96416 Magnetic Base Only

Digital Calipers 0-6" With Case ALL96411

Measure inside, outside and depth dimensions with easy-to-read Metric or SAE LCD display, in .001" increments up to 6". On/Off switch conserves battery and zero setting assures accurate readings. Plastic case provides additional battery storage.

Dial Caliper ALL96410

shockproof and capable of measuring items from .001" to 6" in increments of .001". Includes protective carrying case.



Runout Checker **ALL96440**

Fixture provides an easy way to check for bent torque tubes, drive shafts, torsion bars or radius rods and measures 16-1/2" overall.

Braided Hose Cutter ALL11000



Tired of the jagged edges left after cutting braided hose with a hacksaw? Heavy-duty hose cutter makes clean, snag-free cuts every time. 1-3/8" forged steel jaws will cut up to -20AN steel braided hose.

Replacement Blades ALL11002

Koul Tool Kits

If you have ever struggled while building stainless steel braided lines, the Koul Tool is for you! Insert fitting into the specially designed holder to help guide braided hose into fitting. Kits include tools, fitting adapters for most fittings,

detailed assembly instructions and storage case. Not for use with PTFE-style hoses.

ALL11080..... Koul Tool Kit -4AN To -8AN ALL11081..... Koul Tool Kit -6AN To -10AN ALL11082..... Koul Tool Kit -10AN To -16AN ALL11083..... Koul Tool Kit -4AN To -16AN

ALL11085..... -6AN Kit ALL11086..... -8AN Kit ALL11087..... -10AN Kit

Pistol Grip Grease Gun

ALL14300

Quality gun has comfort grip handle for easy, one hand operation. Gun accepts a standard 14 oz. grease cartridge, features an air bleeder valve to eliminate air lock, and includes a flexible 12" long fill hose.



Grease Gun Tips

Tips reach to grease fittings in tight areas, such as U-joints, and may also be used to grease the ball ALL14305 spline unit on Bert transmissions.

The 2" tip replaces the standard end on most guns with 1/8"NPT. Ouick release 4" tip includes a small and large sleeve to fit standard couplers. Tips are for hand operated grease guns only.

ALL14305 2" Grease Gun Tip **ALL14306** 4" Grease Gun Tip

Tubing Cutters

Cut plastic, aluminum, copper or steel tubing without distorting or crushing. Standard cutter works with tubing from 1/8" up to 1-1/8" and has wide rollers for even tracking of cutter wheel, built in reamer for cleaning inside of tubing and an extra cutting wheel. Mini cutter can cut tubing from 1/8" to 5/8" in tight areas.

ALL11010..... Mini ALL11011 Standard



ALL11011



Double Flare Tool ALL11015

Double flares 3/16", 1/4", 5/16", 3/8' and 1/2" steel or aluminum and .040" copper tubing at 45°, the most common flare used in custom brake and fuel lines. Includes detailed instructions and a convenient plastic storage case.

Brake Pressure Gauge ALL11020

Gauge temporarily replaces the bleeder screw in most aftermarket brake calipers with 1/4"-28 thread bleeder screws to measure brake pressure. Swivel head positions the 2-3/4" diameter gauge for easy viewing. Convenient remote bleeder can be used to evacuate air in the system for accurate readings.

Related Part

ALL11022 Adapter converts ALL11020 and other gauges with 1/4"-28 thread to 10mm-1.50 thread for use with popular GM Metric calipers.

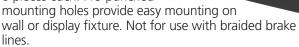
Brake Pressure Gauge Kit ALL11026

Brake pressure gauge kit includes two gauges, allowing one gauge to be used in the front and one in the rear brake system.

Compare front to rear pressures to help diagnose problems or to preset your brake bias. Gauges easily replace 1/4"-28 brake bleeders which are commonly found in most aftermarket calipers.

Hard Brake Line Display Rack ALL052

Display, organize, and inventory many lengths of 3/16" steel brake line. Rack measures 17" wide, and has 21 slots which hold 6 pieces each. Pre-punched



Brake Bleeder Bottles

Contain the mess of bleeding brakes by capturing fluid in this 16 oz. bottle with a 15" long hose which attaches to most bleeder screws. The removable cap has a built-in fitting to secure the hose during storage to help prevent spills. Choose from a steel lanyard retainer that suspends the bottle from a chassis or suspension component, or a magnet

retainer to secure the bottle to a steel object such as a brake drum or rotor during bleeding. ALL11017 has a magnet retainer and a built-in one way check valve for one person brake bleeding.

ALL11019...... Bottle With Lanyard ALL11018..... Bottle With Magnet

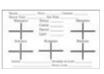
ALL11017..... Bottle With Magnet And Check Valve

ALL99435..... Replacement Hose

Circle Track Set Up Book ALL043

Track important chassis settings with this 4" x 5" pocket size spiral bound book. Each book has 50 carbon backed

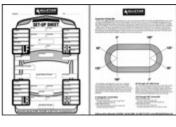




pages perforated for easy tear off.

Circle Track Set Up Sheets ALL045

Keep detailed notes and log important information with Allstar set up sheets. Sheets have blank spaces for documenting chassis information such as caster, camber, shock settings, spring rates, tire size and air pressures. 50 sheets per 8-1/2" x 11" tablet.



Scale Buddy ALL13115

The Scale Buddy is a water filled bladder that may be placed directly into the seat of the car to represent the weight of the driver when setting up and scaling your racecar. Bladder may be filled and emptied in the car using a standard garden hose and weighs up to 100lbs when filled. Note: Designed for set-up purposes only, not designed to be used as ballast during racing.



ALLSTAR' PERFORMANCE

Engine Cradles

Engine cradles are available in standard duty or heavy duty, both with provisions for mounting wheels and are made of 1" square tubing with black powder coating. All cradles are for head



coating. All cradles are for V8 engines, include Grade 5 fasteners and may be easily disassembled for storage. Standard duty cradles accept wheel kits with 3/8" studs. Heavy duty cradles accept wheel kits with 1/2" studs. Wheel kits sold separately.

Standard Duty Cradles

ALL10130..... SB and BB Chevy ALL10138..... GM LS Series ALL10145..... SB Ford*

ALL10147..... SB Ford Modular/Coyote

ALL10150..... SB Mopar

ALL10151..... Hemi (5.7 And 6.1)



Heavy Duty Wheel Mount

Heavy Duty Cradles

ALL10132..... SB and BB Chevy ALL10139..... GM LS Series ALL10142..... Oldsmobile ALL10144 Pontiac ALL10148..... SB Ford*

ALL10149..... SB Ford Modular/Coyote

ALL10152..... SB Mopar **ALL10154**..... BB Ford **ALL10156**..... BB Mopar[†]

*Works with stock and most aftermarket blocks including Dart, World, and Ford Boss with ribbed engine mount bosses and bulged water jackets.

Caster Wheel Kits

Hard rubber wheel kits may be mounted to Allstar engine cradles ALL10130 thru ALL10159. Kits are also available with locking wheels, ideal for storing spare engines in trailer. Standard duty kits feature 3/8" studs and heavy duty models use 1/2" studs. Four wheels per kit.

ALL10162..... Std. Duty 3" Dia. Kit

ALL10163...... Std. Duty 3" Dia. With Locking Kit

ALL10164..... Heavy Duty 3" Dia. Kit

ALL10165...... Heavy Duty 3" Dia. With Locking Kit

ALL10166..... Heavy Duty 5" Dia. Kit

SB/BB Chevy Economy Engine Cradle

ALL10171

Cradle is great for storing or transporting engines safely. Designed to fit small and big block Chevrolet engines, cradle is fully welded from 1" square tubing and powder coated black. Cradle has provisions for mounting our standard duty whool kits with



standard duty wheel kits with 3/8" wheel studs.

SB/BB Chevy Engine Cradle

ALL10172

A quality cradle for small block and big block Chevrolet engines. Casters included



SB Chevy 2-Piece Engine Stand

ALI 1015

2-piece engine stand constructed from 1" x 2" steel tubing is specially designed to clear most oversized dry sump oil pans with up to a 9" deep sump. Stand includes six 3/8" x 1" grade 5 bolts and accepts wheel kits with 3/8" studs.

Sprint Engine Cradle

ALL10159

Cradle bolts to most stock type and aftermarket SB Chevy blocks, including narrow pattern lightweight and standard bell

housing bolt patterns. Slotted front mounts accept most frame width engine mounts. Provisions for standard wheel kits are positioned to support complete engines with attached radiators.

Avoid damage and fluid leaks during storage and transport of many popular transmissions. Multi-position stand also keeps the transmission level and clean during servicing. An adjustable rear stabilizer bracket

can be moved fore and aft as well as vertically to accommodate a variety of transmissions including Bert, Brinn, Muncie, Saginaw, Richmond and many others. Overall dimensions $11" \times 14" \times 6"$.

Engine Lift Handles

ALL10136

Need to move a spare motor when a cherry picker isn't the solution? These machined aluminum sure grip handles will thread into any engine block or cylinder head with 3/8"-16 coarse thread holes. Sold as a set of 4.

 $^{{\}rm †Designed}$ for most Mopar B and RB blocks. Will not work with 392 or 426 "hemi" Engines.



Engine Lift Plate ALL10123

Ease engine swaps with the Allstar engine lift plate. Bolts to manifold in place of carburetor. Yellow zinc coated plate fits standard Holley 4150/4160 and 4500 Dominator, Rochester Quadrajet, Carter, Motorcraft, Edelbrock, Edelbrock Q-Jet and Carter AFB carburetors.

All-In-One Engine Lift Plate ALL10137

Engine Plate has provisions to fit all LS GM engine blocks and most Holley 4150/4160 and 4500 series, Rochester Quadrajet, Edelbrock and Carter AFB Carburetors. Plate features three lifting points for various chain positioning which allows engine weight to be balanced or offset. An offset position is especially helpful when angling an engine (with transmission attached) in or out of a vehicle. Constructed of 3/16" thick zinc plated steel.

Engine Lift Plates For LS Series GM Engines

Engine plates are designed for lifting LS series GM engines. Installation of lift plate requires removal of the intake manifold and valley cover tray to properly secure lift plate to engine block. Plate features three lifting points, allowing engine weight to be balanced or offset. Offset position is helpful when angling an engine (with transmission attached) in or out of a vehicle. Made from 3/16"" thick zinc plated Steel.

ALL10140..... Gen III Engines ALL10143..... Gen IV Engines ALL10141..... Gen V Engines

Ford EFI Engine Lift Plate ALL10125

Ease engine swaps with the Allstar engine lift plate. Fits standard 5.0L/5.8L EFI intakes: OEM, GT-40, Cobra, Holley, Edelbrock.

Engine Oil Pressure Primer Tank ALL10535

Primer tank supplies initial oil to the oil pump in engines equipped with a crank driven oil pump. Fill primer tank with engine oil, then apply compressed air to force the fluid throughout the engine via the oil pressure sender/switch port to pre-lube the entire engine including the oil pump.

Oil Filter Cutter ALL10538

Tool removes the outer shell of most spin-on style engine oil filters to inspect the filter material for contamination or debris.



Freeze Plug Driver Set ALL96482

Have problems installing freeze plugs? Use these plastic drivers along with a hammer or mallet for simple instal-

lation without damaging the plugs or the block. Three sizes per set: 1-1/2", 1-5/8", 1-3/4".

(Size refers to size of plug)

Individual Drivers

ALL96483..... 1-1/2" Driver **ALL96484**..... 1-5/8" Driver **ALL96485**..... 1-3/4" Driver



SB Chevy Cam Bearing Tool ALL96470



For installing cam bearings quickly and easily without damage. Shaft is steel; pilot and driver are aluminum.

LS Main Cap Removal Tool

ALL96525

Quickly and easily pull main bearing caps off GM LS series V8 engines, especially those with main studs. Hook tool to the bottom of cap, press down on handles, and the balanced leverage pulls the cap out of the block with one swift motion. 26" long x 4" high.

Rod And Piston Holder ALL96478

Holder safely supports piston and connecting rod assemblies during engine teardowns or assembly. Slots are 4-3/4" L x 1-1/2" W to accommodate most combinations. Holder measures 24" x 12" x 9-1/2" tall and can be disassembled for storage.

Rod Guide Tool ALL96480

Plastic tool slips over 3/8" or 7/16" rod bolts to aid piston installation and eliminate the chance of rod bolts hitting crank. A must for any engine builder's toolbox.



Related Part

ALL96481 Rod Guide Tool Extensions 4.5", 1-Pair

Plastigage® Kit ALL96475

Plastigage strings are a simple and accurate way to verify crankshaft, main and rod bearing clearances. Kit includes two green .001" to .003" and one red .002" to

.006" (12" long strings), individually packaged inside calibrated sleeves. Detailed instructions are included.



Valve Spring Compressor ALL96490

Adjustable C-clamp style compressor will fit most heads including Hemi. Spring cup will fit stock springs up to 1.750" diameter and has a 1.100" "working window"



for access to keepers, which may be too large for some small diameter spring/retainer combinations. Compressor has 9/16" hex for use with a wrench, ratchet or impact. This tool will handle spring pressures in excess of 1200 lbs. without slipping off.

Feeler Gauges

Use in engine assembly to check connecting rod side clearance, piston ring end gap, spark plug gap and valve lash. Gauges have Metric and SAE sizing designations

etched in each blade. Choose straight or angled sets.

ALL96420 Straight **ALL96421** Angled

Valve Lash Wrenches

Allstar Valve Lash Wrenches save precious time and eliminate fumbling with two separate wrenches. Available for Jesel, T&D and other poly-lock style rocker assemblies.

ALL96400..... 7/16" Box Wrench, 1/8" Allen Wrench, Jesel Assemblies

ALL96401 1/2 Box Wrench, 3/16 Allen Wrench, T&D Assemblies

ALL96402 9/16" Box Wrench, 3/16" And 7/32" Allen Wrenches

ALL96403..... 5/8" Box Wrench, 3/16" And 7/32" Allen Wrenches

Remote Starter Switch Kit ALL76205

Kit includes a low profile, steel cased foot pedal with 8' cord and assorted wire ends to work with many applications. Provides hands free engine cranking when adjusting valves.



Remote Starter Button ALL76206

Kit is very helpful for valve lash maintenance when the ignition panel can't be reached. Leads are 60" long and come complete with gator clamps to connect to starter solenoid.



Spark Plug **Index Shims**

Stackable shims index spark plugs at 30° intervals up to 360° properly positioning ground strap in cylinder head for increased power and clearance between spark plug



and piston. Shims are intended for use with 14mm flat seat spark plugs only. Package of 24 shims contains 12 silver 60°, 12 black 90°, detailed instructions and dial chart.

ALL96505 Shim Kit, Standard O.D. (.800") ALL96506 Shim Kit, Small O.D. (.720")*

*Shims are designed for close tolerance spark plug pockets such as those on ALL-PRO cylinder heads.

Spark Plug Indexing Tool ALL96510

Indexing positions the ground strap of the spark plug properly for best piston dome clear-



ance and un-shrouds the electrode for a more even burn and possible gains of 5-15 horsepower. Works with flat gasket or taper seat 14mm spark plugs. Includes instructions.

Spark Plug Gap Tool ALL96515

Used to set consistent plug gap. Insert plug into holder, then put feeler gauge between ground strap and electrode. Gently turn knurled knob until feeler gauge is snug.

Spark Plug Gap Tool Kit **ALL96516**

Spark plug gap tool guickly and accurately gaps 14mm threaded spark plugs. Thread spark plug into tool, place the correct size feeler gauge beneath the ground strap, then tighten knob to set plug gap. Includes 17 different feeler gauge sizes .010" thru .035".





Port And Polish Kit ALL11052

Kit includes an assortment of 60, 80 and 120 grit cartridge rolls for cleaning and modifying intake and exhaust ports to match gaskets, remove casting marks and for smoothing out runners. Two 1/4" mandrels are included with each kit.



Dykem Layout Fluid ALL12070

Apply layout fluid to the work surface to enhance visibility of scribes during fabrication. Blue fluid dries in minutes to a uniform, thin film without cracking or chipping. 4 oz. container has a built-in brush under cap. Not intended for use in set up of ring and pinion gear sets.



Flywheel Locking Tool SB/BB Chevy ALL96426

Place flywheel locking tool onto rear block dowel pins to prevent the flywheel from turning while tightening or loosening balancer bolts, flywheel bolts, clutch/pressure plate bolts or cam gear bolts. Locking tool works with 153- or 168-tooth flywheels and flexplates.

SB Chevy Crank Socket ALL96424

Steel socket for rotating the crankshaft during engine assembly features a 1" hex and a 1/2" ratchet drive.

Compression Tester ALL96520

Tester checks cylinder compression from 0 to 300 PSI and features an air-hold valve to reset gauge. Onepiece stepped brass end fitting with O-rings fits 14mm and 18mm spark plug threads. Easy-to-read 2-1/2" dial is encased in a metal housing, surrounded by an anti-shock rubber cover. A guick release coupler connects the included 12" flexible hose to the gauge.



Pilot Bushing Install Tool

ALL26115

Driver simplifies installation of pilot bushings or bearings for manual transmissions including Muncie, Saginaw, BorgWarner, T-10 and many other popular transmissions with .590" pilot shafts.

Clutch Alignment Tools

Splined, high-impact plastic tools are helpful when aligning the clutch disc on the



flywheel for proper insertion of the transmission input shaft.

ALL14290 1-1/8" Diameter, 10-Spline ALL14292 1-1/8" Diameter, 26-Spline

Flexible Magnetic Pickup Tool **ALL14172**

Flexible tool bends to multiple positions, extends up to 24" and has a magnetic end to quickly retrieve parts.



Telescoping Magnet ALL14173

A strong (3 pound pull), telescoping magnet that will



retrieve dropped tools or fasteners. Tool extends over 2', and retracts to just 5" to fit in a shirt pocket.

Telescoping Mirror ALL14174

A 1-1/4"

multi-positional,



Caps And Plugs

A must for keeping debris out of lines and hoses. Ideal for keeping internal components of dry sump pumps, fuel pumps, pressure requlators, etc. clean during storage. Caps and plugs fit 37° flared fittings and straight threaded ports. Available in plastic and aluminum.





ALL50801







ALI 50811

Сар	Plug	AN Size	Thread Size	No. Per Pkg.			
Plastic Cap	Plastic Caps And Plugs						
ALL50801	ALL50811	-3	3/8"-24	20			
ALL50802	ALL50812	-4	7/16"-20	20			
ALL50803	ALL50813	-6	9/16"-18	20			
ALL50804	ALL50814	-8	3/4"-16	20			
ALL50805	ALL50815	-10	7/8"-14	10			
ALL50806	ALL50816	-12	1-1/16"-12	10			
ALL50807	ALL50817	-16	1-5/16"-12	10			
ALL50808	ALL50818	-20	1-5/8"-12	5			
Aluminum	Aluminum Caps And Plugs						
ALL50821	ALL50831	-3	3/8"-24	20			
ALL50822	ALL50832	-4	7/16"-20	20			
ALL50823	ALL50833	-6	9/16"-18	20			
ALL50824	ALL50834	-8	3/4"-16	20			
ALL50825	ALL50835	-10	7/8"-14	10			
ALL50826	ALL50836	-12	1-1/16"-12	10			
ALL50827	ALL50837	-16	1-5/16"-12	10			

Cap And Plug Kits



Kits include five of each size, -3AN to -16AN.

ALL50800..... Plastic Cap Kit ALL50810 Plastic Plug Kit ALL50820 Aluminum Cap Kit ALL50830 Aluminum Plug Kit

Steel Twelve Point AN Wrenches

Steel twelve point AN wrenches with rubber coated handles are commonly used in tight areas such as tightening hose ends on dry sump oil pumps or fuel lines.

ALL11178.....-8AN **ALL11179**.....-10AN **ALL11180.....-12AN ALL11181**......-16AN



Funnels

Heavy duty plastic funnels are perfect for topping off fuel or other liquids. Available in several sizes.



ALL40100 6 Qt. Funnel With Brass Screen ALL40102 2 Qt. Funnel With Brass Screen ALL40104 1 Pint Funnel With Brass Screen

Extended Funnels

Funnels with extensions work great for filling fluids in hard-to-reach areas. Standard funnel is useful for power steering, and automatic transmissions. Funnel with flexible extension is ideal for differentials and manual transmissions. Built-in hang tab allows funnel to be secured to body or frame for hands free filling. ALL40107

ALL40107 1 Pint Funnel With Flexible Extension

ALL40108..... 1 Pint Extended Funnel



Aluminum stand simplifies carb maintenance and will hold carb off of work bench surface. Works with Edelbrock, Quadrajet, and Holley 2- and 4-barrel carbs (except 4500 series).



Filter cleaning station simplifies and speeds up the process of servicing 14" washable air filters. Spray air filter with a cleaner/degreaser as recommended by filter manufacturer, allow a brief time to soak, then flush clean with a garden hose. Allow filter to dry completely rotating as necessary. Once filter is dry, use stand to rotate filter for even application of filter oil, if applicable. For use with washable filter elements only (sold separately).



ALL40108

Tool Tray ALL14170

Tool tray measures 12" x 18" x 3ⁱ, with hooks on one side to fasten to race car nose or sprint/midget



front wing and 6" stands on the opposite side so tray will sit level. Tray has 16 holes for spark plug and nozzle holder use.

Carb Hats

Carburetor hats are ideal to cover open carbs and prevent debris from falling into the engine while working in garage or pit area while the air cleaner is removed. 2-1/2" tall carb hats are designed to fit most carbs or throttle bodies with a 5-1/8" diameter neck.





ALI 26043

ALI 26044

ALL26040 Plastic

ALL26042 Plastic With Screen

ALL26043 Aluminum,

ALL26044 Aluminum, With Sealing O-Ring

Note: Hats will not clear choke linkage or shaft on Holley style carbs but will clear choke horn with choke linkage and shaft removed.

Dominator Carb Hat ALL26041

Plastic carb hat is 2-3/8" tall and fits over the 7-1/4" air cleaner opening of Holley Dominator carburetors to prevent water or debris from entering the engine. Solid cover may be drilled when an air cleaner stud is used.



Aluminum plugs have O-rings for a water tight seal and will keep dirt out of injectors while cleaning sprint car. 4-piece set comes with a nylon storage pouch.



Part No.	Size	Wash Plug Dia.	Stack Dia.
Kinsler			
ALL26072	2-1/4"	2.328"	2.335"
ALL26073	2-11/16"	2.762"	2.790"
ALL26074	2-3/4"	2.848"	2.875"
ALL26075	2-13/16"	2.921"	2.950"
ALL26076	2.90"	2.973"	3.00"
Engler			
ALL26033	2-1/2"	2.632"	2.650"
ALL26035	2-13/16"	2.885"	2.905"
ALL26036	2.90"	2.973"	3.00"
ALL26038	3"	3.073"	3.10"
Hilborn			
A1126022	2 7/16"	2 //02 "	2 50"

Sprint Fuel Pressure Gauge **ALL40330**

Fuel pressure indicator gauge allows preadjustment of the high speed, secondary and main valve opening pressures using a compressed air source. Gauge can be mounted directly to the wall or tool box. 4-1/2" diameter dial has a 0-160 PSI range.





Wheelie Bar Wrenches

Billet aluminum wrench is the perfect tool for adjusting wheelie bar height. A highly visible scale printed directly onto the wrench helps to quickly measure height between 2" to 7" in 1/8" increments. Overall wrench length 9" x 3/8" thick.

ALL11195 Wrench For 3/4" Jam Nut ALL11196 Wrench For 15/16" Jam Nut ALL11197 Wrench For 1" Jam Nut



Nitrous Combination Wrench ALL11151

4-in-1 wrench has four different sizes to accommodate -3AN, -4AN, -6AN line fittings



and 1-1/4" bottle fitting. Compact enough to fit in your pocket or glove box for quick bottle changes or to check lines at the track.

Aluminum AN Fitting Wrench Set

ALL11100

Five-piece, aluminum wrench set for use with aluminum AN-style, braided hose fittings manufactured by Aeroquip, Earl's, etc. Sizes included are -6AN, -8AN, -10AN, -12AN,



and -16AN. Each wrench is finished in different color anodizing for easy identification. Also sold each.

Individual Wrenches

ALL11106 6AN	ALL11112 12AN
ALL11108 8AN	ALL11116 16AN
ALL11110 10AN	ALL11118 *20AN

*-20AN wrench not included in set.

Double-Ended Aluminum AN Fitting

Wrench Set

ALL11120

Wrenches make quick work of checking both halves of a fitting



when the line is installed on the car. Won't mar fittings like steel wrenches. Wrenches are also sold individually.

Individual Double-Ended Wrenches

AN Size	Hose Wrenches (Red)) Fitting Wrenches (Blue	
-4, -6	ALL11124	ALL11126	
-8, -10	ALL11128	ALL11130	
-12, -16	ALL11132	ALL11134	

Adjustable Aluminum Fitting Wrenches

Eliminate the guesswork of which wrench is needed to tighten, remove or check steel braided hose fittings. Aluminum wrenches prevent damage to fitting and are available in two sizes: 8" for fittings up to a -10AN, and 10" for fit-

tings up to -20AN.

ALL11152 8" **ALL11153** 10"

Drum/Barrel Pump ALL40114

Hand siphon drum pump dispenses or transfers low viscosity fluids from a 55-gallon drum. Self priming bulb delivers up to 5 gallons per minute. Compatible with gasoline, methanol and nitro methane.

Drum Pump Kit for Utility Jugs

Easily transfer low viscosity fluids from most popular utility jugs without lifting a heavy jug by converting jug into a hand pump unit. Kit includes a cap and hand pump to replace the original utility jug cap. Individual cap may be purchased separately when using an existing pump. Pump siphon tube will need to be cut to length depending on the size of jug used.

ALL40116 Kit For Use With Scribner Jug **ALL40117** Kit For Use With VP Jug **ALL40118** Cap Only For Use With Scribner Jug

ALL40119 Cap Only For Use With VP Jug

Primer Bottle

ALL40090

Durable plastic squeeze bottle is ideal for priming alcohol engines. Cap has an angled filler tube, with tapered tip that easily fits into the vent tube of carburetor fuel bowl. 16.9 ounce capacity.



Mini Stretch Wrap with Handle

Handheld stretch wrap dispenser has multiple uses around the shop or home including bundling parts together to keep organized, protecting items from damage and wrapping up spare parts until needed. Wrap is an 80-gauge

low density polyethylene material measuring 3" wide x 1000ft long and features a high elastic characteristic to keep items tightly bound together.

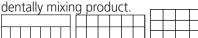
ALL14230 Mini Stretch Wrap with Handle **ALL14232** Replacement Roll 3" x 1000'



Storage Cases

These handy storage cases help organize many items around the shop, trailer or home such as electrical connectors, quick turn fasteners, tire groover and siper blades, small screws, fasteners and many more items.

Curved bottom compartments create a smooth scoop, making it easy to remove the smallest of items. Molded-in dividers prevent items from slipping under dividers and accidentally mixing product.



ı								L						ш					l	Ш						
- [ΙГ						╵╙	_					 ı						
١								Ш						Ш						П						
1								ır	\neg			-		ı ⊢	\rightarrow	-	_	-	-	 1	_	-	-	-	-	-
١								ш	- 1				l	ш	- 1				l	Ш						
ı	_	_	\perp			\Box	\Box	L						╵┕						IJ						
ALL14360 ALL14361 ALL14365 ALL1436									366																	
	ALL14360 Plastic, 15 Compartment, 11" x 7" x 1-3/4"																									
	_		-		_	_						_	_		-											

ALL14361..... Plastic, 18 Compartment, 11" x 7" x 1-3/4" **ALL14365** Metal, 21 Compartment, 9-1/2" x 13-1/2" x 2" **ALL14366** Metal, 24 Compartment, 9-1/2" x 13-1/2" x 2"

Test Light ALL76215

Quickly diagnose electrical problems by testing for current in electrical circuits, relays, switches or fuses. Handheld test light has a 36" lead wire with an insulated clip which fastens to a common ground and a sharp piercing point to probe insulated wire or terminals. Indicator light illuminates identifying powered circuits in 6-12V systems.

Weather Pack Terminal Tool ALL76264

Tool removes male and female pin terminals from Weather Pack connectors without damage.

Weather Pack Pliers ALL76221

Weather Pack pliers will crimp most popular 10-22 gauge non-insulated terminals. 8" overall length.



Impact Crimper ALL76135

Excellent for permanently crimping standard cable ends to battery cables.

Wire And Cable Cutters ALL11003

Capable of cutting copper stranded wire from 20 gauge primary wire to 1/0 gauge battery cable. These specially designed cutters will not flatten wire during cutting, which is helpful when installing connectors and building battery cables. Cutters are not designed to cut steel wire.

Ratcheting Crimp Pliers ALL76220

Perform professional quality crimps on most standard electrical connectors. Pliers include jaws for 22-18, 16-14 and 12-10 gauge connectors and are easily compressed with help from the ratcheting mechanism which releases when connector is fully crimped.

Nylon Tie Wraps

Secure electrical wiring, gauge lines and roll bar padding. 100 per bag. Available in black, natural, red, blue, yellow and purple nylon.

Black	Red
ALL14120 3-3/4"	ALL14126 7-1/4"
ALL14122 6"	ALL14127 14-1/4"
ALL14123 7-1/4"	Blue
ALL14124 11-1/4"	ALL14128 7-1/4"
ALL14125 14-1/4"	ALL14129 14-1/4"
Natural	Yellow
ALL14130 3-3/4"	ALL14136 7-1/4"
ALL14132 6"	ALL14137 14-1/4"
ALL14133 7-1/4"	Purple
ALL14134 11-1/4"	ALL14138 7-1/4"
ALL14135 14-1/4"	ALL14139 14-1/4"

Heavy Duty Nylon Tie Wraps

Heavy duty black nylon ties are ideal for emergency repairs and applications that require a secure attachment.

ALL14380	8", 25-Pack
ALL14381	14", 25-Pack
ALL14383	21", 10-Pack
ALL14385	36", 10-Pack





Nylon Flush Fit Tie Wraps

Flush fit design ties have the excess portion of the tie exit in the same direction as the original tie, helping to eliminate the left-on protruding sharp portion found in standard ties. Package of 100.



ALL14395 8" Long **ALL14396** 11" Long

Nylon Tie Wraps With Mounting Holes

Built-in tab with mounting hole to easily secure wiring harnesses, hoses or cables to a panel with rivets or other fasteners. Package of 25.

ALL14390 8" With #10 Hole **ALL14391** 11" With #10 Hole **ALL14392** 14" With 1/4" Hole



Tie Wrap Tool ALL11005

Tired of cuts from nylon tie wraps that have been trimmed with standard wire cutters? This tool does a great job of drawing nylon ties tight around bundles of wires or cables in tight areas and easily cuts flush with a twist of the wrist. ABS constructed tool has steel cutting blades and works with common size nylon wire ties.

Tie Wrap Mounting Bases

Self-adhesive mounting bases provide a location for attaching standard tie wraps to secure wiring, cables and hoses. Bases mount to clean flat surfaces and accept 75# and smaller wire ties. Package of 10.

ALL14116 3/4" x 3/4" Mounting Base **ALL14117** 1-1/8" x 1-1/8" Mounting Base

233



Radiator Fin Tool Kit

ALL10680

Hand held tool straightens and repairs damaged fins in most radiators, coolers, and air conditioning condensers. Repairing damaged fins provides better airflow through core increasing cooling ability. Six interchangeable heads: 13, 15, 16, 17, 18 and 20 fins per inch.

Blower Fan ALL30002

Compact, 115V, 2.3 amps plastic blower moves up to 300 CFM of air. The quiet electric blower can be adjusted to move cooling air wherever it's needed, up to 30 ft. away. Weighs just 8 lbs. with two built-in receptacles and a 12' long power cord. Optional 5300 BTU heater accessory (sold separately) attaches to front of blower and plugs into one of the receptacles to transform blower into a heater. Heater with blower unit draws 11.7 amps.

Related Part

ALL30003..... Blower Fan Heater Accessory, 3 Lbs.

Wall Mount Radiator Holder Kit ALL12216

Brackets fasten to trailer wall and hold radiator safely in place during transport to avoid damage. Kit includes two 29" long aluminum brackets with adjustment holes at 2" increments and

arms to fit radiator cores up to 2-1/4" wide. Adjustable arms are slotted for quick adjustment with included thumbscrew knobs to fit a variety of radiator heights.



ALL10258

Comfortable, lightweight, general purpose safety glasses have a clear wrap around lens for maximum visibility. ANSI-Z87.1 rated.



Corded earplugs fit instantly without rolling or squeezing. Made of a soft material that cleans up easily in warm, soapy water.

Nitrile Gloves

Nitrile gloves protect against dirt and grime and help prevent oil and harsh chemicals from contacting the skin. Chemical resistant gloves work well for general purpose as well as jobs that involve oil, fuel, brake fluid and most cleaning chemicals such as brake and carb cleaners. Package of 100.

ALL12024 Medium **ALL12025**..... Large **ALL12026** X-Large **ALL12027**..... XX-Large

Allstar Gloves

General purpose gloves protect hands from everyday abuse in the shop or at the racetrack. Lightweight, elastic weave material with reinforced palm and fingers allows mobility and unrestricted use.

ALL99940 Medium **ALL99941** Large **ALL99942** X-Large

Allstar Apron ALL99962

Black cloth apron has pockets to keep tools close at hand. Reverse apron to place pockets on the inside when grinding tires. Adjustable strap allows one size to fit all.



Deluxe Aluminum Mud Scraper ALL44165



Remove the stickiest mud and clay without damaging paint or decals. Lightweight and 32" long to reach wings, deck lids and undercarriage. Use the convenient hole in end to hang scraper.

Pressurized Sprayers

Sprayers are great for applying bulk cleaners, degreasers, solvents, penetrating oils and other lubricants. Sprayers have a capacity of 32 ounces. Versatile nozzle adjusts from mist to a stream.

ALL10516..... Black ALL10518..... Chrome





Racer's Tape

A hundred uses in the shop or at the track, this is true "Racer's Tape".



1"	Wide x	90'
AL	L14140	Silver
AL	L14141	Black

2" Wide x 180' **ALL14150**..... Silver **ALL14151**..... White **ALL14152**..... Red **ALL14153**..... Black **ALL14154**..... Yellow ALL14155 Blue

2" Wide x 180'

ALL14156	Orange
ALL14157	Green
ALL14158	Burgundy
ALL14159	Purple
ALL14162	Teal

3" Wide x 180' **ALL14142.....** White **ALL14143**..... Black

Gaffer's Tape

Vinyl coated gaffer's tape has a dull appearance and is much stronger than standard racer tape.



2" Wide x 165'

ALL14251.	White
ALL14252	Red
ALL14253	Black
ALL14254	Yellow
ALL14255	Navy Blue

1" Wide x 150'

ALL14245	Fluorescent Green
ALL14246	Fluorescent Pink
ALL14247	Fluorescent Orange
ALL14248	Fluorescent Yellow

2" Wide x 45'

ALL14145	Fluorescent Green
ALL14146	Fluorescent Pink
ALL14147	Fluorescent Orange
ALL14148	Fluorescent Yellow

4" Wide x 165'

ALL14261.... White **ALL14263** Black

Non-Skid Tape

Heavy duty, non-skid tape is long lasting and may be used in the race car, shop or trailer. Tape will handle temperatures up to 220°F.



Black And White Checkered Tape ALL14149

Checkered tape has many uses such as signs, displays, race cars, trailers, etc. Rolls are 2" W and 45' L.



Tape Display Rack

ALL050

Two tier rack's top row holds 180' rolls; the bottom holds 45' or 90' rolls. Tape sold separately.



Air Box Tape

Metallized tape has special adhesives to secure and seal panels. Designed specifically for sealing air boxes and other high heat areas. Rolls are 2" W and 180' L.

ALL14270..... Silver **ALL14272**..... Black



Reflective Tape

Reflective tape is weather and solvent resistant for outdoor use on the side and rear of trailers. Can also be used on safety equipment, motorcycles, farm equipment and large trucks. Material is manufactured with the correct required DOT certification markings. 6" Red/6" White pattern. Rolls are 2" W x 50' L.





ALL14240

ALL14240 Triangle Pattern ALL14242 Diamond Plate Pattern

Surface Guard Tape

Clear protective polyurethane tape can be applied directly over painted surfaces or decals to help prevent scratching, chipping or other damage. Use on wheel well openings, rocker panels, headlight decals, door edges or anywhere added protection may be required. Tape is 8 mil thick and provides excellent resistance to ultraviolet light. Will not yellow over time.

ALL14275..... 2" x 30' **ALL14276**..... 3" x 30' ALL14277 4" x 30'



Seal shipping boxes and boxes of spare parts.

ALL14160..... Clear 2" x 330' Roll **ALL14161** Tan 2" x 330' Roll

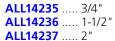






Masking Tape

Premium masking tape is ideal for protecting areas when priming and painting. Waterproof backing is suitable for wet sanding and works with baking cycles up to 230° for 60 minutes. UV resistant.





ALL14236

Scott Rags ALL12005

Multi-purpose cloth-like disposable towels are perfect for shop and trailer. 10" x 12" towels are packaged in a 200 ct. box with pop-up dispenser. Mount to shop or trailer wall with ALL12220 holder



Rags-In-A-Box Holder **ALL12220**

Shop Towels ALL12006

Blue shop towels are much heavier

than standard paper towels and work great for numerous tasks around the shop or track. Rolls contain 60 individually perforated 11" x 9-1/2" disposable sheets.

Keep your work bench clean and your towels within easy reach! White powder coated steel holder fastens to your shop or trailer wall to keep your boxed shop towels up and out of the way. Works with most popular boxed towels measuring 9-1/2" x 9-1/2".

Electrical Tape ALL14280

Protect electrical connections and secure wires. 3/4" x 60' roll. UL approved.



Thread Sealant Tape ALL14282

PTFE tape seals threads on pipe connections. 1/2" x 21' roll.



Silicone Repair Tape **ALL14285**

Tape is a self-fusing silicone with many uses including sealing plumbing and hoses, insulation of wiring from up to 500 degrees of heat, sealing electrical connections and provides extra grip on steering wheels and tool handles. Resists fuels, oils, solvents and will not gum up or stick like most other tapes. Roll is 1" wide x 10' long x 20mil thick.



Shop Towel Roll Holder ALL12219

Aluminum shop towel holder is 11" wide to hold most standard size towel rolls. Two flip-over clips hold the towel rod in place for easy roll replacement and a weighted plate helps keep towels from unrolling when mounted to trailer or shop wall.

Double Sided Tape ALL14288

Double sided tape is a suitable alternative for attaching panels or trim when standard mechanical fasteners are not an option. Tape is ideal for mounting items on trailer walls or attaching aluminum panels in enclosed trailers. Roll is 3/4" W x 15 ft. L.



Cleaning Wipes

Disposable wipes are great for cleaning hands when washing is not an option. Perfect for use after fueling vehicles, making roadside repairs or even as a pre-clean to remove stubborn grease. Durable textured wipes are pre-moistened, citrus scented and enriched with aloe and vitamin E to deep clean and promote soft skin. Resealable package prevents product from drying out.

ALL12016...... 30 Ct. Pop-Up Dispenser ALL12017 60 Ct. Pop-Up Dispenser

Towels

Soft, absorbent terry cloth towels can be used for polishing, wiping up spills or general detailing. Shop towels belong with every tool box as well as in the shop, garage or trailer.



Microfiber Towels ALL12008

12" x 12" terry microfiber towels are great for polishing, cleaning and many other uses around the shop or when detailing a vehicle. Different color towels keep jobs separated and help eliminate cross contamination between various polishes or cleaners. Package of 3.





Ultrasonic Cleaners

Cleaners use high frequency sound waves to create cavitation bubbles to gently deep clean. Cleaner features a digital display to regulate cleaning fluid temperature and machine



run time, a stainless-steel case, a basket to ease handling of parts and a lid.

ALL10640 Small Cleaner - 1 Gallon Capacity, Unit is 13" L x 7" W x 11" H, Basket is 10" L x 5" W x 4" H,

Tank depth is 5"

ALL10642 Large Cleaner - 5 Gallon Capacity, Unit is 21" L x 13" W x 14" H, Basket is 19" L x 10"W x 5" H,

Tank depth is 7-1/2

ALL10644 Cleaner Solution 1-Gallon

Cordless Drill Holders

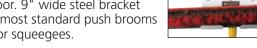
Secure to shop wall or trailer to keep frequently used cordless drills quick at hand! Holder is 6-1/2" wide and available in white or black.

ALL12202 White **ALL12203** Black

Push Broom Holder ALL12204

Stop tripping over the push broom! Handy bracket mounts to the shop or trailer wall to keep push brooms up off

the floor. 9" wide steel bracket holds most standard push brooms or floor squeegees.



Sprint Car Nose Wing Wall Mount Brackets ALL12214

Brackets attach to the side of trailer wall to hold a spare sprint car front nose wing safely in place. Powder coated aluminum brackets feature slotted arms which are fully adjustable to accommodate a variety of nose wing shapes and

sizes. Sold in pairs with retention straps to keep wing secure.



Aerosol **Can Holders**

Bolt to trailer or garage wall to hold cans up to 3" in diameter. Sturdy steel construction is pre-painted white.

ALL12200 Six Can Holder, 23" Long x 3-1/2" Deep x 5-1/2" Tall

ALL12201..... Three Can Holder, 11-1-2" Long x 3-1/2" Deep x

Aerosol Can Tray

ALL12264

Bolt aluminum can tray in multiple locations of shop or trailer walls to keep frequently used chemicals neatly organized and

quickly accessible. Tray measures

16" long x 3-1/2" deep with a 2-1/4" tall front lip.



Trays mount to shop or trailer wall and measure 4-1/2" deep making them perfectly sized to hold most quart oil containers. Travs are fabricated from 1/8" thick aluminum and feature a white powder coated finish.

ALL12265..... 16" Long Tray **ALL12268** 21" Long Tray



ALL12265

Absorbent Mats

A must for the workshop and trailer. These handy absorbent mats have bonded layers, allowing fluid to spread quickly through material.

15" x 60" Rolls (Perforated Every 10")

ALL12030 Universal For All Fluid Types (Oil, Coolant, Water) ALL12031 Oil Only

100-Pack (15" x 10" Individual Sheets)

ALL12032 Universal For All Fluid Types (Oil, Coolant, Water) **ALL12033**..... Oil Only

Multi-Purpose Absorbent ALL12035

Organic material is a dust free alternative when cleaning up spills. Sprinkle product on spills and sweep up. 5 lb. resealable bag.





Ratcheting Tie Down Straps

Tie downs are great for securing vehicles and pit equipment during transport. 2" x 8' long straps have heavy duty plated hardware and a ratchet designed to hold excess strap material as it is pulled through and wrapped up during tightening. ALL10196 has a built-in axle strap with protective sleeve for wrapping around a rear end housing or chassis and then back to itself. The working load limit is the maximum load a strap should be subjected to during normal use.

Part No.	Width	Length	Hook Type	Working Load Limit
ALL10184	2"	8'	Flat	1,660 Lbs.
ALL10188	2"	8'	Direct	1,660 Lbs.
ALL10192	2"	8'	Twist	1,660 Lbs.
ALL10196	2"	8'	Twist	1,660 Lbs.



Race Car Tie Down Package ALL10209

Includes two ALL10196 axle combo ratchet straps and two ALL10200 axle tie back straps. Enough tie downs to secure a car to any trailer.



Axle Straps

Axle straps or winch straps work great for wrapping around the chassis or axle tubes when securing a vehicle to the trailer or when winching a vehicle. Adjustable protective sleeve can be positioned as needed to help prevent strap damage from sharp edges. The working load limit is the maximum load a strap should be subjected to during normal use.

Part No.	Width	Length	Hook Type	Working Load Limit
ALL10200	2"	24"-40" Adj.	Twist	1,660 Lbs.
ALL10203	2"	21"	Delta Ring	3,300 Lbs.
ALL10204	2"	21"	D-Ring	1,660 Lbs.
ALL10207	2"	33"	Delta Ring	3,300 Lbs.
ALL10208	2"	33"	D-Ring	1,660 Lbs.



Chassis Tie Down Brackets ALL60075

Steel brackets weld to chassis and provide a secure mounting location to hook a tie down strap or winch cable. Set of 2.

Recessed D-Ring ALL10210

Heavy duty recessed D-Ring.

D-Ring Backing Plate ALL60074

Backing plate strengthens and reinforces the mounting area of Allstar recessed D-rings. Plate may also be used as a template when installing D-rings and is bare steel, allowing plate to be welded in place. 1/4" thick.

Ratchet Binders



Secure extra equipment in the trailer with these 1" wide binders made of heavy duty nylon webbing. Easy, one hand operation. Ratchet binders have a 1,000 lbs. rating.

ALL10180...... Standard 8' Length ALL10182...... Heavy Duty 16' Length



Aluminum Pit Jack

Lightweight, 3,000 lb. capacity floor jack has a low profile to roll under the lowest slung race chassis with a 3-5/8" pad height. Made of high quality aluminum, jack incorporates a patented hydraulic system to reach maximum

height of 17-1/2". Large, two-piece handle has a spring detent to lock handle halves together. Built-in stops

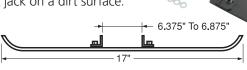


on the jack prevent the handle from falling forward past the 12 o'clock position. Rolls easily on heavy duty rear caster wheels. Optional dirt wing adapts jack for use in unpaved pits. 3-Pump and 6-Pumprefers to the amount of pumps of the handle to lift the tires off the ground of a typical stock car.

ALL10422 3-Pump, Red **ALL10425** 6-Pump, Silver

Dirt Wing For Pit Jack ALL10426

Provides a sturdy base when using the pit jack on a dirt surface.



Jack Stands ALL10124

Jack stands with unitized frame will support three tons. The ratchet locking mechanism assures safe, positive height control. Adjustable from 12-1/2" to 17-1/2". Sold in pairs.

Stack Stands

ALL10254

Steel support stands can be stacked together to conserve valuable space in



the trailer or shop. Stands are 14" tall with a sturdy 12" x 15" base and rated at 3,000 lbs. each. Sold in pairs.

Stack Stand Pads

ALL10256

Steel reinforced rubber pads bolt to the top of our Stack Stands to help eliminate vehicle movement when located on stands. Pads measure 8-1/2" wide and include two molded-in studs with hardware for easy installation. Drilling is required to Stack Stands for installation. Sold in pairs.

Wheel Dollies

Move cars easily to make more room in garage or race shop. Dollies have rounded lower sections to safely cradle each tire. Aluminum dollies are 10" W x 16" L with standard casters for cars up to 4,000 lbs. or deluxe ball bearing swivel casters to accommodate cars up to 5,000 lbs. Deluxe casters also include one wheel brake per dolly. All dollies are sold per pair. Ratings stated are when using a combined set of four same wheel dollies.

ALL10134..... Standard Casters, For Cars Up To 4,000 Lbs.

(Single Dolly Rating 1,000 Lbs.)

ALL10135..... Deluxe Casters, For Cars Up To 5,000 Lbs. (Single Dolly Rating 1,250 Lbs.)

Chassis Dollies ALL10625

Steel chassis dollies allow a car or chassis to be moved around the shop easily and safely. Each dolly measures 30" across the top with high density rubber pads and a single wheel brake to help prevent rolling. Dollies adjust from 13" to 19" high with a removable 1 block on one side for use on sprint cars with a raised rail chassis. Stands also collapse flat for storage in shop or trailer. Dollies are rated up to 2000 lbs. per set and sold as a pair.

Track Mats

Mats fold for easy storage and are ideal for use on asphalt, dirt, in the pits or on the garage floor. Vinyl covered pad measures 52" x 24" unfolded, 12" x 24" folded.

ALL10126..... Black **ALL10127**..... Red **ALL10128**..... Blue

Moving Blanket

ALL12013

All purpose padded moving blanket is an ideal ground cover at the track, fender/seat cover or moving/storage pad. Quilted with bound edges. 72"x 80".



Race Car Air Jacks

Raise your car in seconds! The Allstar Air Jack system connects to your race car with included weld-on mounting rings or with ALL11305

bolt-on mount kit (sold separately) for simplified installation. Works with a nitrogen tank, requires a hipressure regulator and a minimum 400 PSI hose. System will support vehicles up to 3000 lbs. Dirt foot system includes lift cylinders with a large 5" base designed for use in

dirt or soft pit areas. **ALL11302**...... Kit With 11.75" Stroke Cylinders **ALL11300** Kit With 15.25" Stroke Cylinders ALL11301 Kit With 15.25" Stroke Cylinders

With Dirt Foot

ALL11303...... Kit with 15.25" Stroke Cylinders With Dirt Foot (Two Cylinder Kit)

Kits Include: Lift Cylinders, Safety Props, Weld-On Mounting Rings, Air Coupling, Receiver and Plumbing Kit

Replacement Parts

ALL11315 Air Jack Cylinder 11.75" Stroke ALL11316 Air Jack Cylinder 15.25" Stroke ALL11317 Safety Prop For 11.75" Cylinder ALL11318..... Safety Prop For 15.25" Cylinder ALL11319 Mounting Ring Kit ALL11320 Complete Plumbing Kit

Related Items

ALL11305...... Aluminum Bolt-On Mount Kit

(8 pcs.)

ALL11310 Pressure Regulator ALL11312 Premium Hose Kit

High Pressure Regulator ALL11310

Nitrogen tank regulator is adjustable from 10-500 PSI and is designed for use with the Allstar Air Jack kit ALL11300.

Premium Hose Kit For Air Jack System ALL11312

Premium hose kit includes 35' of 500 PSI hose and fittings to connect ALL11300 air jack system to ALL11310 regulator.

Pit Mat ALL10605

Large 10' x 20' black pit mat is made from heavy duty vinyl and includes securing grommets.



ALL11305

Race Car Lift With Pump



Portable lift collapses to a low 3" profile and raises up to 17". Lift is easily positioned under race car to raise off the ground simplifying tire changes and chassis tuning and will support up to 2,400 lbs. Complete system includes a 110VAC, 3/4HP hydraulic pump with cord and plug, hydraulic cylinders with down assist canisters, 1" bolt on risers for cars with raised frame rails, safety struts to lock raised lift in place, assist handle and 20' of hydraulic quick connect hose to attach pump to lift. The pump provides power up/gravity down operation and can be mounted either horizontally or vertically, typically mounted to trailer or a hand cart. A push-button on the motor starts the unit to raise lift. To lower, a manually operated release valve is used for finger-tip control of lowering speed. Pump is compatible with hydraulic fluid, ATF, 10W30 or 10W40 oil (not included). Assembly is required, all hardware included.

ALL11270 Steel Frame Race Car Lift Kit With Pump ALL11272 Aluminum Frame Race Car Lift Kit With Pump

Components

ALL11271 Race Car Lift Steel Frame, Only

ALL11273 Aluminum Frame Only

ALL11274 20' Hydraulic Hose

ALL11275 30' Hydraulic Hose

ALL11276 Steel Handle

ALL99275 Lifting Cylinder Left

ALL99276 Lifting Cylinder Right

ALL99277 Hose (Tee To Cylinder)

ALL11280...... 110V Hydraulic Pump, Only

ALL99273 Down Assist Cylinder

ALL99274 Replacement 90 Degree Cylinder Fitting

ALL99278 Quick Disconnect Fitting Set

Pit Cart Chassis ALL10600

Universal kit is a good starting point for building your own custom pit cart.

Welding is required and the kit includes all the necessary components to get you off the ground with a rolling platform. Includes a pre-welded front cross member, spindles, steering components, 1" x

2" steel frame tubing with main rails

drilled for rear axle, pre-welded rear axle assembly, wheels, tires and a handle. Frame width is designed to be 14" and a maximum frame length of 60" with a 53" wheelbase. Frame may be shortened as needed.



ALL10532

ALL99341



Air Hose

3/8" rubber hose with durable outer coating is weather, oil and solvent resistant. Maximum operating pressure is 200 PSI, burst pressure is 800 PSI. Solid brass 1/4"NPT end fittings.

ALL10526 Air Hose 25' **ALL10527** Air Hose 50'

Nitrogen Bottle Holder ALL12210

Attach to trailer or shop wall to secure 9-1/4" diameter nitrogen bottle in upright position. Heavy steel bracket has a 1-1/2" wide hinged strap that pivots for easy bottle replacements. Overall bracket length is 17-1/2" with mounting holes 16" on center. Set of two.

Pit Sockets

The same pit sockets used by many top race teams. Steel sockets have a 1/2" drive to work with most impact guns and a machined lug nut end (not hex), for use with 1" lugnuts.

ALL10230 2-1/4" Tall, CNC Machined **ALL10232** 3-1/4" Tall, CNC Machined **ALL10233** 3-1/4" Tall, Economy



Hex style pit sockets with a built-in extension prevent extension and socket from separating during wheel changes. Bright

powder coated finish provides a durable coating and helps prevent loss in dark pit areas.

3/8" Drive ALL10234 5" ALL10235 12" 1/2" Drive ALL10239 5" ALL10240 12"

Super Sockets With Extension

Pit sockets are available with 5" or 11" extensions and include our Super Socket for fast wheel changes without jamming lug nuts. Socket

jamming lug nuts. Sockets fit 1" lug nuts and are used with 1/2" drive impact guns.

ALL10242 5" **ALL10241**..... 11"

Economy Quick Spin Lug Wrench

ALL10108

Lug wrench is a 1" diameter tube with a shallow 1" socket welded to one end and rotating piece of plastic pipe attached to the other. The 10" handles are angled with rubber grips and the overall length is 23".

Wheel Wrench ALL10655

Sprint car wheel wrench features a removable sleeve adapter to fit heavy duty and lightweight axles. Six-point socket fits 3" axle hex nuts. Black powder coated aluminum construction.

Aluminum Air Tanks

Portable lightweight aluminum tanks provide an easy way to air up tires. Welded tanks will not rust or corrode and are pressure tested to military specifications up to 300 PSI.

ALL10531..... 7" x 10" Horizontal Tank, 1-1/2 Gallon **ALL10532** 7" x 24" Vertical Tank, 2-3/4 Gallon

ALL10530 9" x 11" Horizontal Tank, 2-3/4 Gallon

ALL10534 9" x 20" Horizontal Tank, 5 Gallon

Replacement Parts

ALL99340 0-200 PSI Gauge ALL99341 Hose With Chuck ALL99342 Brass Manifold

e k

ALL1053

ALL99342 ALL99340

Tire Log Decal

Easy to write on, vinyl decal is handy when recording important tire informa-



tion at the track. 8-1/2" x 2".

ALL047 4-Pack **ALL047-40** 40-Pack





Tire Pressure Gauges

2" gauge has a 12" flex hose with swivel chuck and pressure release valve. Accurate to within +/- 1%.

ALL44076 0-20 PSI **ALL44077** 0-40 PSI



Tire Pressure Gauges, Glow In The Dark

Tire pressure gauge has a glow in the dark face. Swivel chuck rotates 360° on a 14" long rubber hose for easy placement on valve stems with leak free operation. A rubber cover surrounds the gauge for added protection against drops and has a ribbed molded pattern for increased grip. Gauge also features

a built-in pressure release valve for removing air in small amounts for precise pressure adjustments.

2-1/4" Diameter

ALL44056..... 0-15 PSI, 2-1/4" **ALL44057**..... 0-30 PSI, 2-1/4" **ALL44058**..... 0-60 PSI, 2-1/4"

4" Diameter

ALL44046..... 0-15 PSI, 4" **ALL44047**..... 0-30 PSI, 4" **ALL44048**..... 0-60 PSI, 4"



Tire Gauge Holders

Secure holder to shop or trailer wall to keep tire gauge conveniently located. Aluminum holder works with most tire gauges and has wrap around sides to hold gauge in place.





ALL12259..... Holds Gauges Up To 3-1/2" O.D. **ALL12260** Holds Gauges Up To 4" O.D.

Valve Stem Puller ALL44032

Puller threads onto valve stem and properly pulls rubber valve stems into place. Large rubber block protects expensive wheels and creates leverage when pulling.

Valve Core Tool ALL44030

Easily remove and install new valve cores. Base of handle has a machined pattern to aid with grip.
Ergonomically designed and crafted from stainless steel. Measures 3" overall length.

Tire Durometer ALL44034

Easily check tire hardness. Includes storage pouch.

Stagger Gauge

ALL10116

Measures tire diameter and automatically converts it to circumference. Strong tubular gauge will not flex and will provide accurate, consistent stagger measurements every time. Gauge measures from 65" to 115" in 1/4" increments.

Replacement Part

ALL99044..... Tape Decal

Tire Tape Measures

10' long tapes are ideal for measuring tire diameters and checking stagger.

ALL10111 Economy ALL10112 Deluxe

Tire Crayons

Ideal for temporary tire marking. 1/2" x 4-5/8".

ALL12060 White ALL12061 Yellow

Paint Markers

Long-lasting, weather, water, and UV-resistant markers work on glass, plastic, rubber and metal. Durable fiber tip permits fine or bold lines. Perfect for indicating tire stagger. Quick dry, leadfree paint.

ALL12050 Aluminum ALL12051..... Yellow ALL12052 White ALL12053 Red ALL12054 Blue ALL12055 Light Blue ALL12056 Black ALL12057 Orange

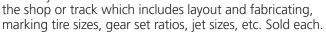
Markal Paint Marker Markal Paint Marker

ALL10112

E MAROUE

Sharpie Markers

Fine point permanent markers work great for many uses around



ALL12072..... Black **ALL12073**..... Silver



ALL10577



Electric Tire Prep Stand

ALL10565

Electric tire prep stand eases grooving, siping, grinding and even cleaning of tires. Two-way switch permits clockwise or counterclockwise rotation. Foot operated pedal controls the rotation of the tire. A 110V accessory outlet is included for convenient plugin of siper or groover. Stand will accommodate 5x5 or Wide 5 wheels.

Individual Components

ALL10566 Wheel Mount/Motor

Assembly

ALL10567 Cart/Stand For ALL10566



Tire Tool Adapter ALL10570

Tire tool adapter is designed for use as an accessory to Allstar's electric tire prep stand ALL10565. Adapter arm with cushioned handles slides left and right to allow tire tool access to the entire width of tire. Mounting hardware and tire tool head are included.

Related Part

ALL10551..... Tire Tool Head (Needler)

Tire Perforator Tool ALL10550

Tire tool perforates tire surface for better traction. Steel roller is 2" wide with a series of 1/4" tall, straight pin rows. 5" wood handle. Use caution when handling and storing tool; pins are needle sharp.

Tire Siper Holder

ALL10571

Bracket bolts to electric tire prep stand and holds ALL10266 heated tire siper.



High Torque Electric Tire Prep Stand

ALL10575

Electric tire prep stand with high torque motor is a heavy duty version of Allstar's standard tire prep stand that provides increased reliability and power when servicing tires. Prep stand eases grooving, siping, grinding and even cleaning of tires. Two-way switch permits clockwise or counter clock-

wise rotation. A foot operated pedal controls the rotation of the tire. A 110V accessory outlet is included for convenient plug-in of siper or groover. Stand will accommodate

5x5 or Wide 5 wheels.

Individual Components

ALL10576...... Wheel Mount/Motor Assembly ALL10577 Cart/Stand For ALL10576

Related Parts

ALL10572 Tire Tool Adapter ALL10574..... Tire Wrapper Attachment

ALL10571..... Tire Siper Holder

Tire Tool Adapter For High Torque Tire Prep Stand ALL10572

Tire tool adapter is designed for use as an accessory to Allstar's high torque electric tire prep stand ALL10575. The adapter's arm features cushioned handles and slides side-to-side, allowing perforator tool access to the entire width of tire. A retractable leg helps support and stabilize the tire tool adapter and unit. Adapter also has mounting holes to accept the ALL10574 Tire Wrapper Attachment (sold separately) to wrap tires after prepping.

Tire Wrapper Attachment **ALL10574**

Tire wrapper attachment mounts directly to tool perforator adapter ALL10572 to easily wrap tires after prepping. Attachment accepts tire wrap tubes up to 18" wide with a core I.D. of 3".



Devin Moran



Tire Prep Stand

ALL10555

Steel tire prep stand is a must when grooving, siping, grinding or even cleaning tires. Bolts together, and the pivoting head eases initial tire mount. A locking T-handle secures the head assembly. Can be used with 5x5 or Wide 5 wheels.



Tire Prep Mount ALL10561

Manual steel tire prep mount eases grooving, siping, grinding or even cleaning tires. Special one-way bearings prevent "roll back" when grooving or siping. Bolt to a wall stud or other solid surface. Can be used with 5x5 or Wide 5 wheels. ALL10562 wall swivel (sold separately) allows use at various angles.

ALL10562 Swivel Wall Mount Bracket

Tire Sipers

Get more sipes per swipe! 6-blade and 14-blade sipers quickly and precisely sipe tires for better traction. Units have adjustable sipe depth. Lightweight sipers use standard utility blades and are constructed for heavy duty use.

ALL10265 6-Blade, Black (Push Or Pull) ALL10264 14-Blade, Red (Pull Only)

Heated Tire Siper

ALL10266

Sipe tires quickly and effortlessly while maintaining precise control. Siping can greatly improve traction by allowing the tire to reach and maintain optimum temperature. A locking lever and blade clamping screw secures up to 13 blades in the head assembly. Blades can be easily positioned up or down to desired cutting depth. A built-in

blade rail holds blade strips in place while individual blades are snapped away. Tool heats in 10-15 minutes. 110V plug in operation only.

Replacement Parts

ALL99104 Tension Lever Kit ALL99109 Heating Element



ALL99109

Siping Blades ALL99108

Siping blades are designed to work in ALL10266 Heated Tire Siper and ALL10540 8-Blade

Siping Head. Four strips contain six individual break-away blades that are easily removed or separated using needle nose pliers. Package of 24 blades.

Multi-Blade Siping Head

ALL10540

ALL10264

Siping head converts standard two blade pistol grip sipers into an eight blade siper. Head holds up to eight individual break-away style blades that can be adjusted as needed for desired cutting depth. Head works with pistol grip and other heated sipers that accept a .400" round mandrel. Blades are sold separately.

Related Part

ALL99108 Siping Blades, 24-Pack





Brady Bacon

ALL44028



Tire Sander

ALL44185

Extend the life of used tires by removing a thin, hardened layer of rubber.

Heavy duty 7" Milwaukee sander with 2.25 HP/13 amp motor, has a 0-6000 adjustable RPM

range to compensate for varying tire hardness and features a 10' detachable cord. Backing pad and discs are sold separately.



ALL44184

ALL44184 Filter For Tire Sander

ALL99134 Replacement 10' Cord for ALL44185 Tire Sander

Backing Pads And Sanding Discs

Backing pads are designed to work with the ALL44185 Tire Sander or other sanders that have a 5/8"-11 arbor. Sanding discs are specific to each backing pad and sold in packs of 5.

7" Backing Pad And Sanding Discs

Backing pad is a multi-piece unit that features a hard backing. The sanding disc is secured to the sander along with the backing pad and reinforcing disc with one spanner nut.

ALL44186 7" Backing Pad ALL44187 7" Sanding Discs, 36 Grit

8" Backing Pad And Sanding Discs

Backing pad is a one-piece unit that features a soft foam backing and a molded-in threaded insert to mount directly to the sander. The backing pad accepts hook-and-loop style sanding discs.

ALL44188 8" Backing Pad ALL44189 8" Sanding Discs, 36 Grit ALL44198 8" Sanding Discs, 24 Grit

ALL44197 8" Sanding Discs, 16 Grit



David Stremme

Tire Grinding Discs











ALL44180

ALL44181

ALL44182

ALL44183

Grind off the hardened outer "skin" on used dirt track tires and create round, aggressive sipes to increase traction. Use caution when handling and storing nail head disc, pins are needle sharp.

Part No.	Description	Diameter	Arbor Hole
ALL44180	Rounded Disc, 23 Grit	4"	5/8"
ALL44181	Flat Disc, 23 Grit	4"	5/8"
ALL44182	Rounded Disc, 16 Grit	7"	7/8"
ALL44183	Nail Head Disc	7"	7/8"
ALL44196	Nail Head Disc	8"	5/8"

Safety Note: To prevent bodily injury the tire must be mounted on the car or secured in a tire holder. Eye and hand protection is required.

Bead Breakers

Convenient tool makes quick work of breaking down even the most stub-

born tire beads.



Durable steel construction with rubber Wide Jaw hand grips. Clamp the hook and inside jaw against the rim, while maintaining slight pressure on the outside handle, then press down on the inside handle, using the outer jaws to separate the tire from the rim, moving around the rim as needed.

ALL44026..... Bead Breaker for 10" Wheels ALL44027..... Bead Breaker for 13" Wheels

ALL10105...... Bead Breaker for 15" Wheels ALL10106 Bead Breaker for 15" Wheels Wide Jaw*

ALL44028..... Bead Breaker w/Adjustable Arm for 10", 13" and 15" Wheels

*Wide jaw bead breaker works well with soft sidewall tires, helping prevent damage to sidewall.

Tire Spoons

Steel tire spoons help to mount and dismount tires ALL10103 ALL10104

after bead has been broken.

ALL44037 Various sizes are available to work with most tire/wheel combinations. Small tool works well to fit inside tire during removal while rounded ends help prevent damage to tire and wheel.

ALL10103...... 24" Straight With Round End ALL10104 16" Curved With Flat End ALL44037..... 16" Curved With Round End ALL44036..... 9" Curved With Round End





ALL10770

"All-In-One" Heated **Tire Groovers**

Self-contained groover has built-in temperature controls, eliminating the additional cord and separate control box common . with other groovers. Don't let the

small package fool you; this groover has the ability to cut small intricate grooves yet still handle removing material up to a 1/2". Tapered, razor sharp blade grooves fast and easy. To operate, insert a single blade into groover, set blade height with a tire depth gauge and set the power level. Place the cutting edge against the tire surface and obtain instant heat by simply squeezing the trigger. Groover features a Hi/Low toggle switch and a temperature control dial in the handle for setting desired heat level. "All-In-One" groover requires "All-In-One" blades; do not use standard groover blades with this groover.

ALL10770...... 110V Groover Includes 1 Each 4/32", 5/32", 6/32", 8/32" and 10/32" Flat Blades.

ALL10772..... 220V Groover (Intended For International Use) Power cord requires the attachment of a 220 volt, grounded, 3-prong plug (not included). Includes 1 Each 4/32", 5/32", 6/32", 8/32" and 10/32" Flat Blades.

Replacement Parts

(for ALL10770 and ALL10772) ALL99300 Head Assembly ALL99301 Head Rebuild Kit ALL99302 Blade Clamps, 1-Pair ALL99303 Clamp Nuts, 1-Pair ALL99304 Clamp Screws, 1-Pair ALL99305 Cradle Springs, 1-Pair ALL99306 Slide Pads, 3-Pair ALL99307 Hex Wrench







Allstar Gloves

General purpose gloves protect hands from everyday abuse in the shop or at the racetrack. Lightweight, elastic weave material with reinforced palm and fingers allows mobility and unrestricted use.

ALL99940 Medium ALL99941 Large **ALL99942** X-Large

Allstar Apron ALL99962

Black cloth apron has pockets to keep tools close at hand. Reverse apron to place pockets on the inside when grinding tires. Adjustable strap allows one size to fit all.



Heated **Tire Groovers**

Groovers add extra traction in minutes. Tapered, razor sharp blade grooves fast and

easy. To operate, insert a blade into groover, set blade height with a tire

depth gauge and set the power level. Features triggerless activation – simply place the cutting edge against the tire surface and press down for instant heat. Includes 2 each 4/32", 6/32", 8/32" and 10/32" flat blades.

ALL10260 110V Groover Features a 4 level dial and a hi/low switch for 8 total heat settings.

ALL10590 220V Groover (Intended For International Use) Features a 4 level dial and a multi-positional dial for fine tuned heat settings. Power cord requires the attachment of a 220 volt, grounded, 3-prong plug (not included).

Replacement Parts

(for ALL10260)

ALL99392 Head Assembly ALL99393 Head Rebuild Kit ALL99394 Blade Clamps, 1-Pair ALL99303 Clamp Nuts, 1-Pair

ALL99304 Clamp Screws, 1-Pair ALL99305 Cradle Springs, 1-Pair ALL99306 Slide Pads, 3-Pair

ALL99307 Hex Wrench

Replacement Parts

(for ALL10270 and ALL10590)

ALL99104 Tension Lever Kit ALL99105 Head Assembly

ALL99106 Front Pads w/Screws, 3-Pair

ALL99107 Rear Pads w/Screws, 3-Pack ALL99127 Head Blade Divider



ALL99392

ALL99394

ALL99104



ALL99105 ALL99106

ALL99393

ALL99306



Durable storage tote has many uses around the shop or in the trailer. Store extra parts or keep parts from being damaged during storage. Great for organizing ratcheting tie downs,

specialty tools, such as tire groover, siper and related tools. Totes also work well for storing chemicals and fluids to prevent spilling in cabinets. Interlocking lid design allows multiple totes to be securely stacked together. Inside dimensions are 20" L x 14" W x 12" H.





"All-In-One" Groover Blades

Hard tempered spring steel blades are designed for use with the ALL10770 and ALL10772 "All-In-One" Heated Tire Groovers. Blades are honed to a razor like finish and have a tapered shape making the blade wider near the top where strength is needed and thinner at the bottom, greatly reducing drag as the blade cuts through the rubber. Blades are sold in packages of 12.

Note: All-In-One Groovers must use these All-In-One Blades but these blades can be used in any of our other groovers.



Blade	Size	Flat Bottom Blades	Round Bottom Blades
#1	1/32"	_	ALL10790
#2	2/32"	_	ALL10791
#3	3/32"	ALL10780	ALL10792
#4	4/32"	ALL10781	ALL10793
#5	5/32"	ALL10782	ALL10794
#6	6/32"	ALL10783	ALL10795
#8	8/32"	ALL10784	ALL10796
#10	10/32"	ALL10785	ALL10797
#12	12/32"	ALL10786	ALL10798
#14	14/32"	ALL10787	_
#16	16/32"	ALL10788	_

Heated Tire Groover Blades

Hard tempered spring steel blades are designed for use with the ALL10260, ALL10270 and ALL10590 Heated Tire Groovers. Blades are honed to a razor like finish and have a tapered shape making the blade wider near the top where strength is needed and thinner at the bottom, greatly reducing drag as the blade cuts through the rubber. Blades are sold in packages of 12.

Note: Do not use these blades in "ALL-IN-ONE" style groovers!



Blade	Size	Flat Bottom Blades	Round Bottom Blades
#1	1/32"	_	ALL10267
#2	2/32"	-	ALL10268
#3	3/32"	ALL10271	ALL10269
#4	4/32"	ALL10272	ALL10276
#6	6/32"	ALL10273	ALL10277
#8	8/32"	ALL10274	ALL10278
#10	10/32"	ALL10275	ALL10279

Heavy Duty Flat Bottom Grooving Blades

Heavy duty blades are twice as thick as standard blades for removing large amounts of material with less chance of blade damage. Commonly used in off-road racing. Package of 12.

ALL10580 #16 Flat, 16/32" ALL10582 #20 Flat, 20/32" ALL10584 #24 Flat, 24/32" ALL10586 #32 Flat, 32/32"

Dirt Tire Soap

ALL78236

Clean your tires like the Pro's! Simply mix with water and spray on your tires before washing them and the mud almost falls off. Cleaner also works for pre-treating your chassis and body before cleaning to help loosen dirt and clay. 1-gallon container.



Easy Wrap Tire Covers

Cover tires quickly and easily. Elastic bands allow you to stretch the cover over your tires after washing or grinding to keep tires clean.



Description	4-Pack	12-Pack
UMP Modified Tires (85-89" Dia.)	ALL44222	ALL44222-12
Late Model Tires (93-96" Dia.)	ALL44223	ALL44223-12

Tire Wrap ALL44224

Tires lose solvents and moisture over time but keeping them covered helps prevent tires from drying out. Wrap also helps

contain or reduce the amount of chemicals used during "soaking" by minimizing evaporation. Wrap is 18" W x 1500' L.



Tire Stack Cover

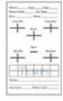
ALL44220

Easy access canvas cover features a full length zipper. Perfect for use in the tire impound, keeping your tires out of the weather or hiding them from the eyes of your competition. 50" tall black cover will fit a set of 4 tires with a 86" maximum circumference.

Asphalt Tire Book ALL041

Keep track of tire settings before and after race. 4" x 5" pocket size book includes 50 carbon copy pages, perforated for easy tear off.







ALL10119

Toe Plates

Aluminum plates simplify setting of toe-in and toe-out. Plates fit against outside edges of tires. Using two tape measures (sold separately), measure the distance front and rear, between plates. The difference in tape readings is the toe setting. Deluxe plates have radiused



edges, slots for narrow and wide tape measures and are 9" tall x 23" wide to work with vehicles with smaller wheel openings. Standard plates are 1/2" thick, 11" tall x 32" wide and work well for vehicles with larger wheels and wheel openings. Set of two plates.

ALL10117 Standard **ALL10119**..... Deluxe

16' Tape Measure **ALL10675**

16' x 3/4" blade has fractional markings every 1/8" for guick reference.



Caster Plate ALL10752

Not sure if you turned your wheels the same amount each time when adjusting caster settings on your race car? Unless you have expensive turn plates, you're never certain, until now. This guick reference gauge positions under the upper ball joint nut, with markings facing up, for easy viewing. Place a mark on the shock body or fabricate an indicator to use as a reference point.

Set-Up Plates

Set-up plates are used for squaring and stringing chassis to ensure accurate chassis set-up by eliminating wheel and tire differences. Plates are 1/2" thick and can also be used when setting bump steer or



checking axle tubes for straightness. Sold each.

ALL10660 5x5, 7" x 28" ALL10662 Wide 5, 12" x 28"

Spindle Slug Tool ALL11182

Tool easily removes spindle slugs that are pressed into fabricated spindles with a standard wrench or socket.

Upper Ball Joint Wrench

ALL11190

Wrench is designed to remove and install common screw-in upper ball joints that are 1.900" wide (ALL56214).

Suspension Tube Set Up Tool

Slide rule device quickly measures and duplicates suspension or steering tube distances with 1/2", 5/8" and 3/4" rod ends. Set-up tool has an engraved scale with 1/16" increments for durability and accuracy.

Bolt Center Caps ALL10678

Caps slip over the head of standard 1/2" bolts to accurately measure the center-to-center length of installed suspension tube assemblies. Machined step secures the end of a standard tape measure for easy reading of the length to the center of the opposite cap. Caps feature a built-in O-ring that allows the cap to swivel on the bolt head and keeps it from falling off. Package of 2

Rod End Centering Kit ALL10672

Compact inserts are placed into rod ends of suspension, steering or other tube assemblies to quickly measure and adjust on the workbench or other flat surface with any standard tape measure. Inserts can be used on assemblies with 1/4", 3/8", 1/2", 5/8" and 3/4" rod ends.

Ride Height Blocks

Chassis set-up blocks are adjustable in 1/4" increments. A quick release pin holds block at desired height. Bottom surfaces of blocks are contoured to fit steel tubing or any flat surface and have magnets for holding block to chassis. Short blocks adjust 1.75"-4". Tall blocks adjust 3"-6". Package of 2.

ALL10720 Short **ALL10721**..... Tall

Ride Height Block Adapters ALL10722

Adapters replace the standard flat pad on Moose style set up blocks and are machined to cradle axle tubes during chassis set-up. Package of 2.

Ride Height Block Cradle Rollers ALL10723

Built-in rollers allow live axle rear-ends to rotate while on the cradles or when using the rear axle to rotate the engine to check or adjust the valve train. Package of 2.





Ground Clearance Indicator

ALL10725

Determine how close the frame is to the ground on the race track. This unique kit features an aluminum bracket that rivets to the frame with an adjustable 4" plastic wear rod.

Replacement Part

ALL10726..... Wear Rods, 4-Pack



Ride Height Set-Up Stick ALL10658

Stick replaces the coil over shock and spring assembly during maintenance. Stick has many uses and may be adjusted to check settings at normal ride height, in race attitude or on the bump stops to evaluate suspension travel. Adjusts from 15" to 24", measured at the center of rod ends.

Digital Bump Stop Gap Tool ALL96412

This tool allows you to measure the gap in your bump set up with your car on the ground. Slide over the shock shaft and adjust between the shock end cap and your bump rubber or shim. Also works well in the shop when setting up multiple combinations with the same gap. For use in non-coilover applications.

Shock Racks

Shock rack holds four shocks with 2-1/2" springs and easily mounts to trailer, shop wall or pit cart.
Rack is designed to hold shocks in place by pushing shock rod end or eye over the outer O-ring or alternatively, the outer O-ring may be removed to expose a predrilled hole for a hairpin clip such as ALL18442, sold separately.

ALL12212..... Standard Rack
ALL12211..... Adjustable Base Rack

Replacement Part

ALL12213..... Shock Pin, O-Ring and Bolt

Extended Length Shock Rack Pin ALL12215

Extended length pin replaces the pin used on our standard and adjustable shock racks allowing a shock or eliminator with a 5" spring to be mounted to the rack. Pins are also ideal for creating custom mounting for use on toolboxes or pit carts. The outer o-ring may be removed to expose a predrilled hole for a hairpin clip such as ALL18442, sold separately.

Shock Eye Socket

ALL64255

The ideal tool for shock rebuilders or anyone that disassembles shocks on a regular basis! Unique socket safely removes and installs the shock rod end without risk of damage to the spherical ball. Steel socket contacts the outer housing of



1/2" rod ends up to .640" wide and has a 1/2" drive for ratchet or impact use.

Shock Workstation

ALL64264

The all-in-one shock workstation holds most shock bodies in the upright position for ease of shaft removal or assembly and holds shock shafts vertical or horizontal for easier repairs and re-valving. Aluminum workstation can be placed in a vise, bench mounted using optional mounting bracket or custom mounted using 1/4" fasteners.

Shock Workstation Base ALL64267

Steel base is helpful when mounting Allstar workstation (ALL64264) in a trailer or to a shop workbench. Mounting hardware included.

Shock Inflation Tool ALL64260

Tool threads onto shock Schrader valves. Fill valve and 0-300 PSI gauge head independently rotate a full 360°, for easy filling and reading. Complete with built-in bleeder and includes a protective storage case.



Jason Feger



Bench Yoke ALL11360

Bench yoke mounts to a workbench to hold transmissions, rear ends, differentials and many other items for assembly or servicing. Yoke rotates 360° and features two 10" long pivoting arms that are 1" wide by 1/2" thick. Tool is unpainted so it can be modified as needed.

Rear End Station Brackets ALL10178

Stand adapter brackets fasten to adjustable arms of most engine stands. Supports full size car and light truck rear axle housings when servicing or replacing differential gear sets. Position housing onto arms and secure into place with included retaining straps.



Pinion Centering Jig ALL68370

Pinion centering jig fastens to the rear end housing and locates the pinion centerline when building or narrowing housings. Machined slots are designed to retain most tape measure ends for accurate measurements. Applications include GM 12 and 14-Bolt, Dana 44 and 60, Chrysler 8-3/4" and, Ford 8.8" and 9" housings.

Pinion Yoke Wrench ALL68372

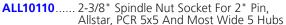
Wrench fastens to most popular pinion flanges and companion flanges to hold when setting bearing



pre-load and tightening retaining bolt or nut. Wrench has provisions to work with 1/2" or 3/4" drive tool. Center hole is 2" to clear most sockets. Universal slotted bolt patterns for 1/4", 5/16" and 3/8" fasteners for most AMC, Dana, Ford and GM yokes.

Spindle Nut Sockets

Description should read: Aluminum hex style spindle nut socket features a 1/2" drive for use with a ratchet.



ALL10115...... 2-7/8" Spindle Nut Socket For 2-1/2" Pin, Allstar, AFCO, Winters And SCP 5x5 Hubs

ALL10114 2-5/8" Spindle Nut Socket For 1-Ton Hubs

NEW

Quick Change Tube Install/Removal Tool ALL11350

Finally, an easy and correct way to install and remove quick change axle tubes. Secure support tool into a vice or to a workbench with optional brackets. Components are included to remove and install tubes with the turn of a wrench. An adapter for tubes with Wide 5 or 5 x 5" hubs is also included.



Related Parts

ALL11355..... Installation End Cap For Bolt-On and 2-7/8" Pin

Wide 5 Tubes

ALL11351 Mounting Bracket Kit For Quick Change Tube Install/

Removal Tool



Axle Spline Tool ALL66104

Tool clamps in a vise to hold 31-spline axles. Assures perfect alignment for maintenance or installation of axle plugs used with Gold-Trac differentials.



T-Handle Axle Puller

ALL66115

All-in-one T-handle puller threads into axle for easy installation or removal. Tool includes adapters to fit 3/8"-16 coarse

or 3/8"-24 fine thread solid axles, and 3/4"-16 fine thread gun-drilled axles.

Extreme Pressure Lube ALL78246

Originally used throughout the tool and die industry, this lube provides superior durability and wear protection, taking the place

of anti-seize in many applications. Recommended for spline-to-spline contact, threaded adjusters and engine fasteners. 4 ounce tube.

Quick Change Oil Plug Sockets

Six-point sockets fit on a 1/2" drive ratchet to remove or install plugs on quick change rear ends. Small socket fits plugs in most center sections and side bells. Large socket fits plug in Winters Ford 9" housings. Not recommended for high torque applications.

ALL11160...... Small, 1-3/8", Blue Anodized **ALL11161**..... Large, 1-7/8", Red Anodized





Absorbent Mats

A must for the workshop and trailer. These handy, absorbent mats have bonded layers, allowing fluid to spread quickly through material.



ALL12030 Universal For All Fluid Types (Oil, Coolant, Water) **ALL12031**..... Oil Only

100-Pack (15" x 10" Individual Sheets)

ALL12032 Universal For All Fluid Types (Oil, Coolant, Water) **ALL12033**..... Oil Only

Quick Change Gear Case ALL14355

Sturdy composite storage case protects and holds up to 8 sets of quick change gears. Case has molded in carrying handles and metal hinges. 5" x 8" x 15-1/2" overall when closed.



gear sets and keeps them clean. Lid snaps shut to hold gears in place. 8"L x 5"W x 2"H.



Description	Single	10-Pack
White	ALL14350	ALL14350-10
Black	ALL14351	ALL14351-10
Yellow 6-Spline (Midget) Gear Set	ALL14352	ALL14352-10

Gear Tote Tray

ALL12269

Neatly organize up to 10 quick change gear tote boxes vertically. Tray is 21" long x 5-1/2" deep with a 4" tall front edge, making them

perfectly sized for Allstar gear tote boxes.



Plastic Drain Pan ALL40112

Round drain pan has molded-in handles and pour spout. 13-1/2" x 11" x 4", 7 quart capacity.





Aluminum drain pan is handy when changing quick change gears.
Built-in perforated shelf holds gears and allows lube to drain into pan. Pan is 10-1/4" wide, 12" long and 3-3/4" deep.



Spencer Hughes

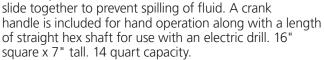


Jared Spalding

Drain Pan With Pump

ALL14171

Drain pan with built-in pump holds and refills fluids when changing rear end gears. Molded plastic basin and lid







Aluminum Shifter Assemblies

Anodized lightweight shifters include 3/8" rod ends, locknuts and rods. Rods are tapped for right and left hand



Shifters Include:

One Lever Shifter – one 24" shifter rod Two Lever Shifter – two 24" shifter rods

Three Lever Shifter – one 16" and two 24" shifter rods

ALL54108 One Lever Shifter, Gold ALL54110 Two Lever Shifter, Gold ALL54120 Two Lever Shifter, Black ALL54121 Two Lever Shifter, Red ALL54122 Two Lever Shifter, Purple ALL54112 Three Lever Shifter, Gold

Replacement Parts

ALL58006..... 3/8" RH Male Rod End **ALL58016**..... 3/8" LH Male Rod End

ALL99015 Rod End Reducer Bushing 3/8" To 1/4" ALL99016 Nylon Washer Between Shift Levers

Two Lever Shifter With Lock

Black anodized shifter has a built-in lock to hold the transmission in gear when track is rough. Shifter includes one 16" long and one 24" long 3/8" shifter rod, 3/8" rod ends and hardware.

Universal Aluminum Shifter Arm ALL54118

Made from 1/4" thick aluminum, arm has a 3/8" wide mounting slot and a 1/4" shifter rod mounting hole. Arm works with most transmissions.

Two-Lever Shifter With Unequal Handles ALL54124

Black anodized aluminum shifter has two unequal length handles. Shorter lever commonly used for reverse. Includes 3/8" rod ends, lock nuts and 24" long rods.

Shifter For Gen II Bert Transmission

Black anodized aluminum shifter is designed specifically for the Gen II Bert transmission. Shifter features a spring loaded reverse lockout gate to help prevent accidental engagement and easy to read engraved range positions. Shifter includes a 14" long, 3/8" shifter rod with rod ends along with an installation template.

Aluminum Shifter Rods

Black anodized shifter rods are tapped for right and left hand 3/8" rod ends and work with Allstar ALL54108-ALL54122 aluminum shifter assemblies. Rods can be used in many other applications as well.

ALL54113 14" ALL54114 16" ALL54115 20" ALL54116 24" ALL54117 30" ALL54119 40"



Related Parts

ALL58006 3/8"-24 RH Male Rod End **ALL18254** 3/8"-24 RH Jam Nut, 4-Pack **ALL58016** 3/8"-24 LH Male Rod End **ALL18255** 3/8"-24 LH Jam Nut, 4-Pack

ALL99015 Rod End Reducer Bushing 3/8" To 1/4"

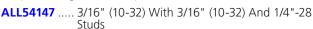
Clevis Kit For Bert Transmission

ALL54128

Aluminum clevises have 1/2" inside spacing with 3/8" mounting holes and 3/8"-24 RH threads to connect Allstar and most other shifters to Bert transmission. Two clevises per kit with jam nuts.

Quick Release Cable Ends

Quick release ends are used when a connection needs to be removed and installed often. Steel constructed housing has a spring loaded release to keep housing secure to pivot ball.



ALL54149 1/4"-28 With 1/4"-28 Stud





Shifter Boot ALL54130

Fire resistant, black thermal boot helps prevent fire from entering driver compartment. Boot is 7" tall with Velcro strap closure at top. Base is 6" x 7". Used by many top Cup, xfinity, Truck, CRA and Late Model teams.

Throttle/Shift Cables

Cables have many uses including use as a throttle cable or as a shifter cable in many applications. Cables have 7/16" mounting threads, 10-32 RH cable ends and 3" of travel. Cables are listed as overall length.

ALL5414243" ALL5414560"

Morse Cable Half Clamp ALL18325

Aluminum clamp fits over groove in nonthreaded Morse style cables with a 3/8" housing to secure cable in place. Clamps feature a #10 (3/16") mounting hole. Sold each.



CNC-machined billet aluminum shifter clamps to the frame on driver's right. Designed for use with live axle shifter quick change. Shifter includes all steel hardware, heavy duty cable and quick release end.

Replacement Part ALL54142 43" Long Cable

Transmission Breather Kit ALL36147

Breather kit provides a remote location for adding a larger breather to many popular manual transmissions. Kit relocates the breather exit location and helps prevent fluid from leaking or blowing out of standard breathers. Includes a remote breather, 15" braided line, mounting bracket and adapter fitting with 1/8"NPT threads.



Dipsticks feature a positive lock to keep dipstick in place and seal tight to prevent fluid leaks while sealing out moisture and debris. Steel case fill tubes have a gold finish, include a welded-on mounting tab, and are fitted with a rubber grommet type seal to reduce the

risk of leaks common with traditional O-ring seals. Locking dipstick tubes are





Replacement Part

ALL99285 Sealing Grommet

Transmission Coolers

Universal coolers reduce operating temperature of the fluid, extend life of the transmission and provide better performance. Use as a stand alone cooler or as an auxiliary unit to increase cooling



capacity of a stock system. Increased cooling is recommended when using a high stall converter, or if the vehicle is used for towing. Coolers have 3/8" barbed fittings and include rubber hose, clamps and mounting kit.

Part No.	Overall Size	Core Size	GVW
ALL26700	12.5" x 5"	9" x 5"	10,000 Lb.
ALL26702	16" x 5"	12" x 5"	12,000 Lb.
ALL26704	12.5" x 7.5"	9" x 7.5"	16,000 Lb.
ALL26706	16" x 7.5"	12.25" x 7.5"	18,000 Lb.
ALL26708	16" x 10"	12.25" x 10"	20,000 Lb.





Flexplates

Flexplates transfer engine power to the transmission, include the starter ring gear and have dual (10-3/4" and 11-1/2") converter bolt patterns unless specified. SFI flexplates meet SFI 29.1 specifications including .035" thicker material than stock

OE plates, starter ring gears welded on both sides and a gold zinc chromate finish. 153 tooth flexplates measure approximately 12-7/8" in diameter. 168 tooth flexplates measure approximately 14-1/8" in diameter.

Description	Balanced	Stock Replacement	SFI
SB Chevy 153-Tooth	Internally	ALL26835	ALL26830
SB Chevy 153-Tooth, 86-Up	Externally	ALL26836*	ALL26831*
SB/BB Chevy 168-Tooth	Internally	ALL26805	ALL26800
SB Chevy 168-Tooth, 86-Up	Externally	ALL26806	ALL26801
SB Chevy 400, 168-Tooth	Externally	ALL26815	ALL26810
BB Chevy 454, 168-Tooth	Externally	ALL26825	ALL26820
GM LS 3-Bolt, 168-Tooth	Internally	ALL26845 [†]	ALL26840 [†]

^{*}Single 10-3/4" Torque Converter Bolt Pattern.

Flywheel Locking Tool SB/BB Chevy ALL96426

Place flywheel locking tool onto rear block dowel pins to prevent the flywheel from turning while tightening or loosening balancer bolts, flywheel bolts, clutch/pressure plate bolts or cam gear bolts. Locking tool works with 153- or 168-tooth flywheels and flexplates.

Balancing Plate ALL26120

Plate is installed between crankshaft flange and the flywheel allowing a popular internally balanced Chevy 350 flywheel to be used with an externally balanced 400 crankshaft.

Note: These are not designed to be used with an automatic transmission flexplate.

GM LS Engine To TH350/TH400 Adapter Sleeve ALL26121

Crank adapter sleeve allows use of an early TH350/TH400 style transmission with an LS engine.

Torque Converters

Ideal for mild performance applications, including moderate drag racing, factory or street stocks. Economical converters are completely remanufactured with new pump drive hubs and thrust washers. Exact stall speeds will vary depending upon displacement, torque and vehicle weight.

Part No.	Description	Stall Speed
ALL26908	TH-350/400 10-3/4" B.C.	2000-2200
ALL26906	TH-350/400 10-3/4" B.C.	2200-2600
ALL26900	TH-350/400 10-3/4" B.C.	2700-3000
ALL26902	TH-350/400 10-3/4" B.C.	3200-3500
ALL26904	TH-350/400 10-3/4" B.C.	3500+

Pilot Bushing Install Tool ALL26115

Driver simplifies installation of pilot bushings or bearings for manual transmissions including Muncie, Saginaw, BorgWarner, T-10 and many other popular transmissions with .590" pilot shafts.

Extended Length Pilot Bushings

Use these extra long bushings when distance between engine and bellhousing has increased due to use of mid-plates, rear motor mounts or adapters. Bushings help maintain true alignment of clutch disc to flywheel.

ALL26112..... Bronze Bushing

ALL26114[‡] Steel Roller Bearing Bushing (has a machined in roller bearing to reduce friction and wear.)

‡Bearing is shipped dry. Apply a good quality, high-temp grease upon installation.

Clutch Alignment Tools

Splined, high-impact plastic tools are helpful when aligning the clutch disc on the flywheel for proper insertion of the transmission input shaft.

ALL14290 1-1/8" Dia, 10-Spline **ALL14292** 1-1/8" Dia, 26-Spline

Transmission Stand ALL10174

Avoid damage and fluid leaks during storage and transport of many popular transmissions. Multi-position stand also keeps the transmission level and clean during servicing. An adjustable rear stabilizer bracket can be moved fore and aft as well as vertically to accommodate a variety of transmissions including Bert, Brinn, Muncie, Saginaw, Richmond and many others. Overall dimensions 11" x 14" x 6".

Transmission Stand ALL10175

Stand is designed to accept most three and four speed GM manual transmissions and also Bert/Brinn style transmissions with modification to rear pad mount.

Transmission Blanket ALL69010

Contains transmission explosions on high horsepower race cars with stock firewall/ floor pan or where a



transmission shield isn't practical. NHRA and IHRA approved blanket measures 12" x 47" and meets SFI 4.1 specifications. Includes straps to secure it to any transmission.

[†]Will not fit 1999-2000 6.0L applications with 0.400" extended crank flange originally equipped with flat flexplate and will not fit 4L80E transmissions

6-3/4"

4-3/4

ALL69042

ALL69043



Torque Ball Safety Blanket ALL55220

Fire resistant safety blanket designed by Jason Meyers Racing protects drivers' legs and feet in the event of a U-joint failure. Ballistic nylon covered blanket weighs just 1-1/2 lbs. and has guick release adjustable straps that allow blanket to be removed easily for servicing torque ball and U-joint. Blanket includes two mounting brackets, mounting studs, nuts and installation instructions.

Replacement Parts

ALL55224 3/8" Mounting Stud Kit ALL55226 Mounting Tabs, 1-Pair

Bellhousing Dowel Pins

Steel dowel pins are approximately 1/2" longer than stock pins and are required when running an engine mid-plate, rear motor mounts or an aftermarket bellhousing. These extended length pins also help with alignment when installing an engine. Pins fit most GM blocks and are sold in pairs.

ALL38150 Solid Pins ALL38152 Hollow Pins

Solid Transmission Mount

ALL38070

Solid 3/16" steel mount fits most TH350. TH400, Powerglide, and all BorgWarner, Muncie, and Chrysler 4-speed transmissions. Eliminates twisting, flex, and distortion. Not recommended for use with rubber engine mounts.

Transmission Mount Bracket

ALL38072

May be welded to chassis to support manual or automatic transmissions. Steel bracket is 1/8" thick with 1" x 7/16" slots for mounting bolts.

Clutch Discs For Bert Transmission

Quality discs are a must when rebuilding the internal clutch of Bert transmissions. Friction disc and steel plate sets are sold separately.

Note: Friction discs need to be soaked in Type-F automatic transmission fluid for at least 2 hours before installation.

ALL26950 Clutch Friction Discs 6-Pack ALL26952 Steel Clutches 5-Pack

Bert Clutch Assembly Tool

ALL14295

Shaft is used to help align counter shaft when replacing clutch discs and clutches. Shaft features a through hole for installing threaded rod when assembling counter gear assembly before installation, along with an internal thread to assist when removing if necessary.

Tailshaft Seal And Bushing

The tailshaft bushing is a regular wear item, located inside the transmission tailshaft housing. It should be replaced when replacing the tailshaft seal or when a driveshaft failure has occurred. A worn bushing will cause excessive side-to-side movement of the slip yoke and create a vibration or leak. Replacement bushing and seal fits GM Powerglide, Turbo 350, Saginaw, Muncie, Bert and Brinn transmissions.

ALL72150 ... Seal ALL72152 ... Seal With Bushing

Slip Yokes

Slip yokes provide an important link in today's driveline and chassis combinations. Yokes are available in standard length for most street applications with minimal suspension travel to extra-long for racing suspensions that have a radical amount of travel. 27-spline yokes accept 1310 style U-joints and are for use in many popular transmissions

including TH350, TH700R4, Muncie and Saginaw 3 and 4 speeds, Bert and Brinn non-ball spline.

ALL69040.....6" ALL69042 6-3/4" ALL69044..... 7-1/2" ALL69046.....8"

ALL69048..... 8" (Extra Clearance)

Hardened

ALL69043 6-3/4" ALL69045 7-1/2" ALL69047 8"

U-Joints

Performance U-joints are greasable and fit a variety of driveshaft combinations.

1310 Series: 3.218" Wide with 1.062" Diameter Caps **1330 Series:** 3.622" Wide with 1.062" Diameter Caps **1350 Series:** 3.622" Wide with 1.187" Diameter Caps

U-Joints With Same Cross Width

ALL69030..... 1310 Series ALL69031 1330 Series ALL69032 1350 Series

U-Joints With Different Cross Widths

ALL69034 1310 to 1330 ALL69037 1310 to 1330* ALL69035 1310 to 1350 ALL69036 1330 to 1350



Width = B, Caps = A

^{*}Standard 1330 spread with larger 1.125" diameter caps.



Universal Three Fastener Plastic Wheel Covers with No Hardware



High impact plastic wheel covers feature three reinforced slots for mounting wheel cover to wheel. Covers fit a variety of 15" bead lock wheels including Weld, Bassett and Aero. Mounting Hardware not included.

ALL44280.... Black **ALL44286....** Orange **ALL44281** White **ALL44287**.... Silver **ALL44282**.... Red ALL44288.... Neon Yellow **ALL44283**.... Blue ALL44289.... Neon Green ALL44290.... Neon Pink ALL44285.... Yellow

Universal Three Fastener Plastic Wheel Covers with Quick Turn Fasteners



High impact plastic wheel covers feature three guick turn fasteners located in a reinforced slot, allowing the same cover to fit a variety of 15" bead lock wheels including Weld, Bassett and Aero.

ALL44230.... Black ALL44236.... Orange ALL44231 White **ALL44237**.... Silver ALL44232 Red ALL44238.... Neon Yellow ALL44233 Blue ALL44239.... Neon Green ALL44235.... Yellow ALL44240.... Neon Pink

Replacement Parts

ALL99338 Cover Fasteners, 3-Pack

3 Fastener Wheel Rings

Wheel rings fit non-bead lock wheels by securing to the inside lip of most 15" racing wheels to provide a mounting point for a 3 fastener wheel cover.

Rings For Cover With Quick Turn Fasteners

ALL44228..... Steel Round Style Ring **ALL44229**..... Steel Flat Style Ring **ALL44179** Aluminum Flat Style Ring

Ring For Cover With Bolt-On Fasteners

ALL44243..... Steel Round Style Ring ALL44245 Aluminum Flat Style Ring

ALL44225..... Bolt-on Conversion Kit For 1" Springs, 3 Pieces ALL44226..... Bolt-on Conversion Kit For 1-3/8" Springs, 3 Pieces

Universal Six Fastener Plastic Wheel Cover with No Hardware ALL44250

High impact plastic wheel cover features six reinforced slots for secure mounting of wheel cover. Mounting Hardware not included.



Universal Six Fastener Plastic Wheel Cover with Quick Turn Fasteners

ALL44246

High impact plastic wheel cover features six quick turn fasteners for secure mounting.



ALL44247

6 Fastener Wheel Rings

Wheel rings fit 15" non-bead lock wheels by securing to the inside lip of most racing wheels to provide a mounting point for a 6 fastener wheel cover.



ALL44247 Steel Round Style Ring **ALL44249**..... Aluminum Flat Style Ring

Ring For Cover With Bolt-On Fasteners

ALL44251 Steel Round Style Ring ALL44253 Aluminum Flat Style Ring



Bolt-On Wheel Cover Conversion Kit

Kit includes 1/4"-20 insert plates, wheel cover bolts and rivets to convert a wheel cover retainer ring with troublesome quick turn fasteners to a bolt-on style ring.



Description	3-Pack	24-Pack
Kit To Replace 1" Quick Turn Springs	ALL44225	ALL44225-24
Kit To Replace 1-3/8" Quick Turn Springs [†]	ALL44226	ALL44226-24

†Most popular size found on non-bead lock wheel cover retainer rings.

Sprint Wheel Cover Bolt Kits

Kit includes 5/16"-28 bolts, 1-3/8 spread aluminum insert plates with steel threaded inserts, e-clips to keep bolts on the wheel cover and rivets. Package of 3.



ALL44265 Stainless Steel ALL44266..... Titanium

ALL99420 Replacement E-Clips, 12-Pack



AII 44228

ALL44179



Weld Style Plastic Wheel Cover ALL44168

High impact plastic wheel cover secures to 15" Weld beadlock wheels or non-beadlock wheels equipped with a retaining ring. Covers include quick turn mounting fasteners.

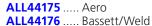


Replacement Parts

ALL44179 Retainer Ring for Weld Style Cover **ALL99165** Fasteners For Wheel Covers, 3-Pack

Aluminum Wheel Covers

Prevent mud and dirt build up in outer wheel shell. Covers fasten quickly with three quick turn fasteners. Covers fit bead lock wheels only and are sold each.



Replacement Parts

ALL99165 Cover Fasteners, 3-Pack



ALL44175

Wheel Cover Ring

ALL44178

Mounting ring installs between the rim and the bead lock ring on bead lock wheels, allowing installation of a wheel cover with a Weld pattern.



Titanium Fastener Kit For Bead Lock

Kit includes 16 pieces of 5/16"-18 x 1" long bolts to reduce rotating weight over standard fasteners. These fasteners work with most beadlock wheels and weigh a total of 114 grams.

Note: Kit will not work with Sander Engineering beadlock wheels

Wheel Rim Screws ALL44045

Self-tapping 1/4" diameter screws anchor the tire to the rim to prevent spinning. For drag use. Package of 35.



Foam Mud Plugs

An economical way to prevent mud build-up inside racing wheels. Foam discs, in 5" and 3" widths, install quickly and easily in 15" diameter wheels. Allstar logo is imprinted on one side. Sold each.

5" Mud Pluas

ALL44150 Black ALL44151 Red ALL44152 Blue ALL44153 Orange ALL44154 Yellow ALL44155 Purple

3" Mud Plugs

ALL44190 Black **ALL44191** Red **ALL44192** Blue **ALL44193** Orange **ALL44194** Yellow **ALL44195** Purple



Left Rear Inner Mud Shields

Stainless steel shield fits over most 5x5 hubs and inside 15" wheels to help reduce mud build-up commonly found on the backside of the left rear wheel of dirt cars.

ALL44270..... Shield for 2" Backspace Wheel **ALL44271**..... Shield for 3" Backspace Wheel



Mike Marlar



Ryan Thomas



Wheel Studs

Larger-than-stock studs require redrilling of stock flanges. Check sanctioning body for wheel stud requirements. Package of 5.



			Underhead	Thread	Knurl	Knurl
Part No.	Size	Thread	Length	Length	Length	Dia.
ALL44110	1/2"-20	Fine	2.000"	.925"	.250"*	.585"
ALL44111	1/2"-20	Fine	1.875"	1.250"	.500"*	.685"
ALL44112	1/2"-20	Fine	2.250"	1.300"	.600"*	.600"
ALL44114	5/8"-18	Fine	2.000"	1.250"	.560"	.685"
ALL44115	5/8"-11	Coarse	2.000"	1.00"	.375"	.690"
ALL44117 [†]	5/8"-11	Coarse	2.750"	1.750"	.375"	.690"
ALL44116 [‡]	5/8"-11	Coarse	2.750"	1.450"	.725"	.690"
ALL44113 [†]	5/8"-11	Coarse	3.750"	2.750"	.375"	.690"
ALL44119 [‡]	5/8"-11	Coarse	3.750"	2.400"	.725"	.690"

^{*}Length with shoulder.

[‡]Popular Wide 5 Hub Wheel Stud



43/64" Wheel Stud Drill Bit ALL11045

43/64" bit is correct for drilling hubs or axle flanges to accept most 5/8" wheel studs with .690" knurl diameter. 1/2" shank.

Economy Quick Spin Lug Wrench ALL10108

Lug wrench is a 1" diameter tube with a shallow 1" socket welded to one end and rotating piece of plastic pipe attached to the other. The 10" handles are angled

with rubber grips and the overall length is 23".

Glueless Lug Nuts

Open end lug nuts attach to the wheel with springs for FASTER pit stops! Kits contain 5 glueless lug nuts with springs attached and self-tapping screws for mounting.



Lug Nuts



Large diameter, open end lug nuts are designed to fit most racing wheel applications and will not pull through the wheel. Nuts are available in steel or aluminum with SAE or metric threads and feature a 45° tapered seat.

Description	Pack Of 10	Box Of 100	Box Of 350	Box Of 400
Aluminum Lu	g Nuts			
5/8"-11 (Coarse)	ALL44096	ALL44096-100		
Double Chamfer	ALL44030	ALL44030-100	_	_
5/8"-11 (Coarse)	ALL44097	ALL44097-100		
Double Chamfer§	ALL44097	ALL44097-100	_	_
Steel Lug Nut	ts (Heat Tre	ated and Zi	nc Plated)	
5/8"-11 (Coarse)	ALL44098	ALL44098-100		
Double Chamfer	ALL44098	ALL44098-100	_	_
5/8"-11 (Coarse)	ALL44106	ALL44106-100	_	ALL44106-400
5/8"-18 (Fine)	ALL44104	ALL44104-100	_	ALL44104-400
1/2"-20 (Fine)	ALL44102	ALL44102-100	ALL44102-350	-
7/16"-20 (Fine)	ALL44100	ALL44100-100	_	ALL44100-400
12mm - 1.25	ALL44103	ALL 44102 100	ALL44103-350	
(Metric)	ALL44 103	ALL44 103-100	ALL44 103-330	_
12mm - 1.5	ALL44101	ALL44101-100	ALL44101-350	
(Metric) [^]	ALL44101	ALL44 101-100	ALL44 10 1-330	_

§Hard coated.

Hex Pit Sockets With Extension

Hex style pit sockets with a built-in extension prevent extension and socket from separating during wheel



changes. Bright powder coated finish provides a durable coating and helps prevent loss in dark pit areas.

3/8" Drive ALL10234 5"

ALL10235 12"

1/2" Drive

ALL10239 5" ALL10240 12"

Super Sockets With Extension

Pit sockets are available with 5" or 11" extensions and include our Super Socket for fast wheel changes without jamming lug nuts. Sockets fit 1" lug nuts and are used with 1/2" drive impact guns.

ALL10242 5" ALL10241..... 11"

Aluminum Wheel Adapter ALL44128

Adapter bolts to stock 5 x 4-1/2" or 4-3/4 bolt circle hub or axle flanges when adapting to 5 x 5" bolt circle pattern wheels. Adapter is fitted with 5/8"-11 coarse thread studs and measures 1" thick. Adapters are bolted from the backside of hub or axle using 1/2"-20 mounting hardware (not-included). Not for use with additional wheel spacers and additional machining may be required for proper installation.

[†]Popular 5x5 Hub Wheel Stud

[^]Most popular metric for GM, Ford and Chrysler.



Aluminum Wheel Spacers

Change wheel offset without changing wheels! Universal design fits 5 on 4-1/2", 5 on 4-3/4" and 5 x 5" patterns. Uses 5/8" stud slot to aid in centering.



ALL44216 1/4" ALL44217 1/2" ALL44218 3/4" ALL44219 1"

Aluminum Wheel Spacers

Spacers fit 4-1/2", 4-3/4" and 5" bolt circle patterns. Spacers increase track width, requiring less wheel offset. Sold



ALL44120 1/4" ALL44121 1/2" ALL44122 3/4" ALL44123 1"

Note: 4-1/2" and 4-3/4" bolt patterns have 1/2" holes; 5" bolt pattern has 5/8" holes.

4 Lug Steel Wheel Spacer **ALL44200**

Steel spacer is 1/4" thick, fits 4x4-1/4" and 4x4-1/2" bolt patterns with 1/2" wheel studs.



5x5" Steel Wheel Spacers

Spacers fit 5x5" hubs with 5/8" studs and provide maximum tread width for adjustment of chassis weight distribution. Spacers are made from tough 1018 steel and have a 3-1/2" I.D. and a 7" O.D.



ALL44124 1/16" ALL44125 1/8" **ALL44126** 1/4"

Aluminum Wide 5 Wheel Spacers

One-piece aluminum spacer moves Wide 5 wheel outboard. Sold each.





Aluminum Wide 5 Threaded Wheel Spacers

Aluminum spacers thread directly onto wheel studs of Wide 5 hubs with 5/8"-11 threads. Hex design is easily installed and removed. Longer studs may be required when using spacers. Package of 5.

5 1	5
ALL44210 1/4"	ALL44214 3/4
ALL44211 3/8"	ALL44215 1"
ALL44212 1/2"	

Tire Sander ALL44185

Extend the life of used tires by removing a thin, hardened layer of rubber. Heavy duty 7" Milwaukee sander with 2.25 HP/13 amp motor, has a 0-6000 adjustable RPM range to compensate for varying tire hardness and features a 10' detachable cord. Backing pad and discs are sold separately.



ALL44184 Filter For Tire Sander

Backing Pads And Sanding Discs

Backing pads are designed to work with the ALL44185 Tire Sander or other sanders that have a 5/8"-11 arbor. Sanding discs are specific to each backing pad and sold in packs of 5.

7" Backing Pad And Sanding Discs

Backing pad is a multi-piece unit that features a hard backing. The sanding disc is secured to the sander along with the backing pad and reinforcing disc with one spanner nut.

ALL44186 7" Backing Pad **ALL44187** 7" Sanding Discs, 36 Grit



Backing pad is a one-piece unit that features a soft foam backing and a molded-in threaded insert to mount directly to the sander. The backing pad accepts hook-and-loop style sanding discs.



Tire Grinding Discs











ALI 44183

Grind off the hardened outer "skin" on used dirt track tires and create round, aggressive sipes to increase traction. Use caution when handling and storing nail head disc, pins are needle sharp.

Part No.	Description	Diameter	Arbor Hole
ALL44180	Rounded Disc, 23 Grit	4"	5/8"
ALL44181	Flat Disc, 23 Grit	4"	5/8"
ALL44182	Rounded Disc, 16 Grit	7"	7/8"
ALL44183	Nail Head Disc	7"	7/8"
ALL44196	Nail Head Disc	8"	5/8"

Safety Note: To prevent bodily injury the tire must be mounted on the car or secured in a tire holder. Eve and hand protection is required.



ALL10770

ALL99301

ALL99306

"All-In-One" Heated **Tire Groovers**

Self-contained groover has built-in temperature controls, eliminating the additional cord and separate control box common with other groovers. Don't let the small package fool you; this groover

has the ability to cut small intricate grooves yet still handle removing material up to a 1/2". Tapered, razor sharp blade grooves fast and easy. To operate, insert a single blade into groover, set blade height with a tire depth gauge and set the power level. Place the cutting edge against the tire surface and obtain instant heat by simply squeezing the trigger. Groover features a Hi/Low toggle switch and a temperature control dial in the handle for setting desired heat level. "All-In-One" groover requires "All-In-One" blades; do not use standard groover blades with this groover.

ALL10770...... 110V Groover Includes 1 Each 4/32", 5/32", 6/32", 8/32" and 10/32" Flat Blades.

ALL10772...... 220V Groover (Intended For International Use) Power cord requires the attachment of a 220 volt, grounded, 3-prong plug (not included). Includes 1 Each 4/32", 5/32", 6/32", 8/32" and 10/32" Flat Blades.

ALL99300

ALL99302

Replacement Parts

(for ALL10770 and ALL10772) ALL99300 Head Assembly ALL99301 Head Rebuild Kit ALL99302 Blade Clamps, 1-Pair ALL99303 Clamp Nuts, 1-Pair ALL99304 Clamp Screws, 1-Pair ALL99305 Cradle Springs, 1-Pair ALL99306 Slide Pads, 3-Pair ALL99307 Hex Wrench



Description 4-Pack 12-Pack UMP Modified Tires (85-89" Dia.) ALL44222-12 ALL44222 Late Model Tires (93-96" Dia.) ALL44223 ALL44223-12

Tire Wrap ALL44224

Tires lose solvents and moisture over time but keeping them covered helps prevent tires from drying out. Wrap also helps

contain or reduce the amount of chemicals used during "soaking" by minimizing evaporation. Wrap is 18" W x 1500' L.

Heated Tire Groovers

Groovers add extra traction in minutes. Tapered, razor sharp blade grooves fast and

easy. To operate, insert a blade into groover, set blade height with a tire

depth gauge and set the power level. Features triggerless activation – simply place the cutting edge against the tire surface and press down for instant heat. Includes 2 each 4/32", 6/32", 8/32" and 10/32" flat blades.

ALL10260 110V Groover Features a 4 level dial and a hi/low switch for 8 total heat settings.

ALL10590 220V Groover (Intended For International Use) Features a 4 level dial and a multi-positional dial for fine tuned heat settings. Power cord requires the attachment of a 220 volt, grounded, 3-prong plug (not included).

Replacement Parts

(for ALL10260)

ALL99392 Head Assembly ALL99393 Head Rebuild Kit ALL99394 Blade Clamps, 1-Pair ALL99303 Clamp Nuts, 1-Pair ALL99304 Clamp Screws, 1-Pair ALL99305 Cradle Springs, 1-Pair ALL99306 Slide Pads, 3-Pair ALL99307 Hex Wrench

Replacement Parts

(for ALL10270 and ALL10590)

ALL99104 Tension Lever Kit ALL99105 Head Assembly

ALL99106 Front Pads w/Screws, 3-Pair ALL99107 Rear Pads w/Screws, 3-Pack

ALL99127 Head Blade Divider



ALL99392



ALL99393

ALL99306





Tire Stack Cover ALL44220

Easy access canvas cover features a full length zipper. Perfect for use in the tire impound, keeping your tires out of the weather or hiding them from the eyes of your competition. 50" tall black cover will fit a set of 4 tires with a 86" maximum circumference.



ALL44028

Wide Jaw



"All-In-One" Groover Blades

Hard tempered spring steel blades are designed for use with the ALL10770 and ALL10772 "All-In-One" Heated Tire Groovers. Blades are honed to a razor like finish and have a tapered shape making the blade wider near the top where strength is needed and thinner at the bottom, greatly reducing drag as the blade cuts through the rubber. Blades are sold in packages of 12.

Note: All-In-One Groovers must use these All-In-One Blades but these blades can be used in any of our other groovers.



Blade	Size	Flat Bottom Blades	Round Bottom Blades
#1	1/32"	_	ALL10790
#2	2/32"	-	ALL10791
#3	3/32"	ALL10780	ALL10792
#4	4/32"	ALL10781	ALL10793
#5	5/32"	ALL10782	ALL10794
#6	6/32"	ALL10783	ALL10795
#8	8/32"	ALL10784	ALL10796
#10	10/32"	ALL10785	ALL10797
#12	12/32"	ALL10786	ALL10798
#14	14/32"	ALL10787	-
#16	16/32"	ALL10788	-

Heated Tire Groover Blades

Hard tempered spring steel blades are designed for use with the ALL10260, ALL10270 and ALL10590 Heated Tire Groovers. Blades are honed to a razor like finish and have a tapered shape making the blade wider near the top where strength is needed and thinner at the bottom, greatly reducing drag as the blade cuts through the rubber. Blades are sold in packages of 12.

Note: Do not use these blades in "ALL-IN-ONE" style groovers!



Blade	Size	Flat Bottom Blades	Round Bottom Blades
#1	1/32"	_	ALL10267
#2	2/32"	_	ALL10268
#3	3/32"	ALL10271	ALL10269
#4	4/32"	ALL10272	ALL10276
#6	6/32"	ALL10273	ALL10277
#8	8/32"	ALL10274	ALL10278
#10	10/32"	ALL10275	ALL10279

Heavy Duty Flat Bottom Grooving Blades

Heavy duty blades are twice as thick as standard blades for removing large amounts of material with less chance of blade damage. Commonly used in off-road racing. Package of 12.

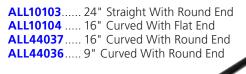
ALL10580 #16 Flat, 16/32" ALL10582 #20 Flat, 20/32" ALL10584 #24 Flat, 24/32" ALL10586 #32 Flat, 32/32"

Dirt Tire Soap ALL78236

Clean your tires like the Pro's! Simply mix with water and spray on your tires before washing them and the mud almost falls off. Cleaner also works for pre-treating your chassis and body before cleaning to help loosen dirt and clay. 1-gallon container.



Steel tire spoons help to mount and dismount tires after bead has been broken. Various sizes are available to work with most tire/wheel combinations. Small tool works well to fit inside tire during removal while rounded ends help prevent damage to tire and wheel.



Bead Breakers

Convenient tool makes quick work of breaking down

even the most stubborn tire beads. Durable steel construction with rubber hand grips. Clamp the hook and inside jaw against the rim, while maintaining slight pressure on the outside handle, then press down on the inside handle,

using the outer jaws to separate the tire from the rim, moving around the rim as needed.

ALL44026.... Bead Breaker for 10" Wheels

ALL44027.... Bead Breaker for 13" Wheels

ALL410105. Boad Breaker for 15" Wheels

ALL10105...... Bead Breaker for 15" Wheels ALL10106 Bead Breaker for 15" Wheels Wide Jaw*

ALL10106 Bead Breaker for 15" Wheels Wide Jaw*
ALL44028..... Bead Breaker w/Adjustable Arm for 10", 13" and
15" Wheels

*Wide jaw bead breaker works well with soft sidewall tires, helping prevent damage to sidewall.

Aluminum Air Tanks

Portable lightweight aluminum tanks provide an easy way to air up tires. Welded tanks will not rust or corrode and are pressure tested to military specifications up to 300 PSI.

ALL10531..... 7" x 10" Horizontal Tank, 1-1/2 Gallon ALL10532 7" x 24" Vertical Tank, 2-3/4 Gallon ALL10530 9" x 11" Horizontal Tank,

2-3/4 Gallon

ALL10534 9" x 20" Horizontal Tank, 5 Gallon



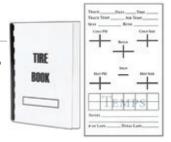
ALL10532



Asphalt Tire Book

ALL041

Keep track of tire settings before and after race. 4" x 5" pocket size book includes 50 carbon copy pages, perforated for easy tear off.



Tire Log Decal

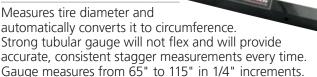
Easy to write on, vinyl decal is handy when recording impor-



tant tire information at the track. 8-1/2" x 2".

ALL047 4-Pack **ALL047-40** 40-Pack

Stagger Gauge ALL10116



Replacement Part ALL99044..... Tape Decal

Tire Tape Measures

10' foot long tapes are ideal for measuring tire diameters and checking stagger.

ALL10111 Economy **ALL10112** Deluxe



Tire Crayons

Ideal for temporary tire marking. 1/2" x 4-5/8".

ALL12060 White ALL12061..... Yellow

Paint Markers

Long-lasting, weather, water, and UV-resistant markers work on glass, plastic, rubber and metal. Durable fiber tip permits fine or bold lines. Perfect for indicating tire stagger. Quick dry, lead-free paint.

ALL12050 Aluminum ALL12051 Yellow ALL12052 White ALL12053 Red ALL12054 Blue ALL12055 Light Blue ALL12056 Black ALL12057 Orange



Tire Pressure Gauges, Glow In The Dark

Tire pressure gauge has a glow in the dark face. Swivel chuck rotates 360° on a 14" long rubber hose for easy placement on valve stems with leak free operation. A rubber cover surrounds the gauge for added protection against drops and has a ribbed molded pattern for

increased grip. Gauge also features a built-in pressure release valve for removing air in small amounts for precise pressure adjustments.

2-1/4" Diameter

ALL44056..... 0-15 PSI, 2-1/4" **ALL44057**..... 0-30 PSI, 2-1/4" **ALL44058**.... 0-60 PSI, 2-1/4"

4" Diameter

ALL44046..... 0-15 PSI, 4" **ALL44047**..... 0-30 PSI, 4" **ALL44048**..... 0-60 PSI, 4"

Tire Gauge Holders

Secure holder to shop or trailer wall to keep tire gauge conveniently located. Aluminum holder works with most tire gauges and has wrap around sides to hold gauge in place.





ALL12259

1144047

ALL12259..... Holds Gauges Up To 3-1/2" O.D.

ALL12260 Holds Gauges Up To 4" O.D.

Tire Gauges

2" gauge has a 12" flex hose with swivel chuck and pressure release valve. Accurate to within +/- 1%.

ALL44076 0-20 PSI **ALL44077** 0-40 PSI



In-Car Memory Tire Temp Gauge



Digital tire temp gauge with memory (maximum temp). Gauge will show real-time temp and allows you to recall max temp after your race. Align and mount the sensor within 24" of tire to monitor for best results. Designed for use with 12 and 16 volt systems. Temp Range 0-300° F. Gauge size is 2.75" wide x 1.375" tall. Sensor size is 3/4" x 3/4". Sensor mounting bracket 1.5" wide. Complete kit includes gauge, sensor, wiring and instructions.

ALL80085..... Complete Kit ALL80086..... Replacement Sensor



Tire Durometer ALL44034

Easily check tire hardness. Includes storage pouch.



0-30 Lb. Tire Relief **Pre-Setter Gauge**

ALL44080

An accurate method for presetting tire reliefs. A constant flow of air to the relief duplicates the air pressure against the relief in the tire. Just attach air chuck to one end of the gauge and the relief valve hose to the other end. 0-30 PSI gauge can be recalibrated to zero if dropped.



Inflating tires through quick disconnects mounted in rim eliminates an extra valve stem. Valves work with Allstar Performance center reliefs and other popular plastic or aluminum quick disconnect fittings. Sold in pairs.



Wheel Disconnects

Fit 5/8" diameter valve stem hole for use with center reliefs and Schrader (Fill) valve (ALL44065).

ALL44060..... Plastic, 4-Pack ALL44061 Plastic, Each

ALL44062..... Aluminum, 4-Pack ALL44063..... Aluminum, Each

Replacement Parts

ALL44066..... Sealing Washer, 4-Pack

ALL44067..... Grommet, 4-Pack





ALL44060

ALL44066 ALL44067

Valve Stem Puller ALL44032

Puller threads onto valve stem and properly pulls



rubber valve stems into place. Large rubber block protects expensive wheels and creates leverage when pulling.

Valve Core Tool ALL44030

Easily remove and install new valve cores. Base of handle has a machined pattern to aid with grip. Ergonomically designed and crafted from stainless steel. Measures 3" overall length.

Brass Valve Stems

Brass bolt-in valve stem resists cutting during contact. Sold each.

ALL44134 Brass Valve Stem. Fits .625" Hole ALL44135 Chrome Plated Brass Valve Stem.

Fits .453" or .625" Hole

Replacement Parts

ALL99150 Valve Core, 10-pack ALL99151 Valve Stem Caps, 10-Pack



Snap-In Rubber Valve Stems

Economical rubber valve stems pull through wheel for easy installation. Large stem for 5/8" hole is the most popular size valve stem used in racing wheels. Smaller stem for .453" hole is commonly found in stock steel and utility vehicle wheels.

ALL44136 Stem For 5/8" (.625") Hole, 4-Pack **ALL44136-50**..... Stem For 5/8" (.625") Hole, 50-Pack **ALL44139** Stem For .453" Hole, 4-Pack

Flush Mount Valve Stem Kit ALL44137

Chrome finished steel, bolt-in, valve stem mounts in standard valve stem location and provides a clean semi-flush appearance.

Valve stem features an o-ring to seal against the outside of the wheel and a rubber grommet, washer and nut that seals against the inside of the wheel. Kit includes four valve stems with dust covers and an extension filler tube. Valve stems are designed for use in wheels with .453" valve stem holes.

Replacement Part

ALL44138 Replacement Filler Tube

Valve Stem Cores

This inner portion of the valve stem is often damaged or leaking. Cores are easy to replace with ALL44030 tool when replacing tires to assure a leak free valve stem. Universal design fits most standard valve stems.

ALL99150 10-Pack ALL99150-100 100-Pack

Valve Stem Caps

An often overlooked item, caps prevent dirt and debris from entering the core portion of valve stems. Stainless steel caps have an inner seal for additional sealing.

ALL99151 10-Pack **ALL99151-100** 100-Pack

Hex Head Valve Stem Caps ALL44053

Keep dirt and debris out of valve stems while providing an attractive finishing touch to wheels. Chrome plated brass hex caps fit most valve stems and have a built-in inner seal to prevent air loss. Package of 4.



ALLSTAR' PERFORMANCE

*ALLSTAR

Allstar Hats

Hats have Allstar logo embroidered on the front and an adjustable head band.



ALL99951 Black

ALL99957 Black With Mesh Back
ALL99959 Black With White Mesh Back

Allstar Beanie

Allstar T-Shirts
T-shirts have a large
Allstar logo on the
back and a small
logo on the front
left chest. Available
in black, red, gray or charcoal. Specify size when
ordering
(YM*, YL*, S, M, L, XL,
XXL, XXXL).

ALL99902 Black **ALL99904** Red **ALL99906** Gray **ALL99907** Charcoal

*Sizes YM and YL only available in Black or Charcoal

Allstar Graphic T-Shirt

ALL99903

Black t-shirt with red and gray graphics on front and back. Specify size when ordering (S, M, L, XL, XXL, XXXL).

Allstar Circle Track T-Shirts ALL99901

Dark gray t-shirts have a circle track theme and Allstar logos on front and back. Specify size when ordering (S, M, L, XL, XXL, XXXL).



Allstar Ladies Vintage T-Shirts

Available in burgundy, charcoal or navy. Specify size when ordering (S, M, L, XL, XXL).

ALL99920 Burgundy **ALL99921** Charcoal **ALL99922** Navy



Allstar Full-Zip Hoodie

ALL99917

Charcoal full zipper style hoodie features a small Allstar logo on left chest and is made from a 50/50 blend of soft spun cotton and poly fleece. Specify size when ordering (S, M, L, XL, XXL, XXXL).



Allstar Hoodie

ALL99916

Allstar hoodie features a two color design and is 100% polyester for a wrinkle free look. Specify size when ordering (S, M, L, XL, XXL, XXXL).



Allstar Sweatshirt

ALL99912

Black sweatshirt has a small Allstar logo embroidered on the left chest. Specify size when ordering (M, L, XL, XXL, XXXL).



Black hooded sweatshirt has large Allstar logo across the chest, drawstring hood and a large pocket. Specify size when ordering (YM, YL, S, M, L, XL, XXL, XXXL).





Allstar Lightweight Jacket ALL99918

Black jacket has a small Allstar logo on front left chest area. Specify size when ordering (L, XL, XXL, XXXL).



Jacket has a small Allstar logo on front left chest area. Nylon shell and fleece liner Specify size when ordering (L, XL, XXL, XXXL).



Allstar Apron ALL99962

Black cloth apron has pockets to keep tools close at hand. Reverse apron to place pockets on the inside when grinding tires. Adjustable strap allows one size to fit all.



Allstar Gloves

General purpose gloves protect hands from everyday abuse in the shop or at the racetrack. Lightweight, elastic weave material with reinforced palm and fingers allows mobility and unrestricted use.



Allstar **Umbrella ALL99960**

Versatile umbrella is only 16" long when retracted, but opens to a full 36". Easily stored.

Allstar Can Cooler ALL99965

ALLSTAN

Keep your hand warm and your favorite beverage cool and covered.





Merchandising Displays

Allstar Performance merchandising displays for race, street and drag. Each 4' x 4' display features a variety of fast-selling products to satisfy customer needs. A layout diagram is supplied to simplify set up. Display packages include free bonus items such as Allstar header display, Allstar decals, Allstar hang tags and hooks. Display rack not included.

ALL070 ... Circle Track ALL071 ... Circle Track ALL072 ... Drag Race

ALL073 ... Street Performance ALL074 ... Open Wheel/Sprint

Brake Fitting Displays

8" x 10" card includes an assortment (1 piece each) of popular brake line fittings. Visit website for breakdown.

ALL080	. Display #1
ALL081	. Display #2
ALL082	. Display #3
ALL083	. Display #4



Allstar Clock ALL99968

Silver framed 12" diameter clock features a bright white face with easy-to-read black numbers and hands. Includes AA battery.



ALLSTA



Allstar Decals

ALL029	2" x 6"
ALL030	3" x 10"
ALL031	6" x 18"
ALL032	8" x 26"
ALL034	10" x 32"



Hang Tags ALL040

Place tags behind product in showroom or parts trailer to provide part number, description and price information for reordering. Package of 100.



Allstar Banner ALL010

Allstar Performance banner is 30" tall x 72" wide.



Black Plastic Bags ALL048

18" L x 14-1/2" W. Package of 100.



Allstar Showroom Display Header ALL038



Display header provides an excellent way to display Allstar products. Precut 6" x 48" black painted aluminum header may be trimmed to desired width.

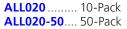
Peg Hooks

Peg hooks fit standard 1" spaced peg board. Available in 2", 4" or 6" lengths, 1/8" diameter. Package of 50.

ALL054	 2"
ALL055	 4"
ALL056	 6"

Product Fix-It Tags

Clear plastic tags are used to repair or reinforce the peg hook hole of most carded and bagged product. Tags have a self-adhesive backing which provides a quick and easy option for repairing display merchandise.



Catalog Display Rack ALL042

Display Allstar catalogs next to products on counter top or as part of pegboard or slat wall display. Includes 10 Allstar Performance catalogs.



Allstar Counter Mat ALL062

18" L x 11-1/2" W.







Mike Spatola

Steve Peeden



	Page No.
010	266
020	266
029	266
030	266
031	266
032	266
034	266
038	266
040	266
041	247, 262
042	266
043	226
045	226
047	241, 262
048	266
050	235
052	130,226
054	266
055	266
056	266
059	246
062	266
070	265
071	265
072	265
073	265
074	265
080	265
081	265
082	265
083	265
10103	178, 245, 261
10104	178, 245, 261
10105	178, 245, 261
10106	178, 245, 261
10108	241, 258
10110	146, 250
10111	242, 262
10112	242, 262
10113	48, 204, 210, 220
10114	145, 146, 250
10115	146, 250
10116	242, 262

Part No.	
10117	185, 248
10119	185, 248
10120	107, 224
10121	107, 224
10122	107, 224
10123	100, 228
10124	239
10125	228
10126	239
10127	239
10128	239
10129	239
10130	100,227
10132	100,227
10134	239
10135	239
10136	100,101, 227
10137	228
10138	100
10138	227
10139	100,227
10140	228
10141	228
10142	100,227
10143	228
10144	100,227
10145	100,227
10147	100,227
10148	100,227
10149	100,227
10150	100,227
10151	100,227
10152	100,227
10154	100,227
10156	100,227
10157	100,227
10159	100, 101, 164, 227
10162	100,227
10163	100,227
10164	100,227
10165	100,227
10166	100,227
10171	100,227
10172	100,227
10174	227,254

Part No.	Page No.
10175	254
10178	147,250
10180	238
10181	156,163, 165
10182	238
10184	238
10188	238
10192	238
10196	238
10200	238
10203	238
10204	238
10207	238
10208	238
10209	238
10210	238
10211	159
10214	159
10217	158
10218	158
10219	158
10221	158
10222	158
10223	160
10225	159
10228	160
10229	160
10230	241
10232	241
10233	241
10234	241,258
10235	241,258
10239	241,258
10240	241,258
10241	241,258
10242	241,258
10246	159
10247	159
10248	159
10249	159
10252	163,171
10254	239
10256	239
10258	160,234
10260	246,260
10264	244

Page No. Part No. Page No. 254 10265 244 147,250 10266 178,244 238 10267 247,261 156,163,165 10269 247,261 238 10271 247,261 238 10272 247,261 238 10274 247,261 238 10275 247,261 238 10276 247,261 238 10276 247,261 238 10277 247,261 10278 247,261 10279 247,261 10280 159 10280 159 10280 159 10285 159 10280 159 10285 159 10281 159 10288 159 10282 159 10288 159 10291 159 10294 159 10292 159 10298 159 10293 159 10299 159			
147,250 10266 178,244 238 10267 247,261 156,163,165 10269 247,261 238 10271 247,261 238 10272 247,261 238 10273 247,261 238 10274 247,261 238 10275 247,261 238 10277 247,261 238 10278 247,261 238 10278 247,261 238 10279 247,261 238 10279 247,261 10280 159 10280 159 10280 159 10280 159 10281 159 10282 159 10283 159 10284 159 10285 159 10287 159 10288 159 10299 159 10291 159 10292 159 10293 159 10402 48,220			
238 10267 247,261 156,163, 165 10268 247,261 238 10271 247,261 238 10272 247,261 238 10273 247,261 238 10274 247,261 238 10275 247,261 238 10276 247,261 238 238 10279 247,261 238 10279 247,261 238 10279 247,261 238 10279 247,261 10280 159 10280 159 10280 159 10280 159 10281 159 10282 159 10283 159 10284 159 10285 159 10287 159 10288 159 10290 159 10291 159 10292 159 10293 159 10294 159 10295 159			
156,163, 165 10268 247,261 238 10271 247,261 238 10272 247,261 238 10273 247,261 238 10274 247,261 238 10275 247,261 238 10276 247,261 238 10277 247,261 238 238 10279 247,261 238 10279 247,261 238 10280 159 238 10280 159 238 10280 159 10280 159 10285 159 10281 159 10287 159 10285 159 10288 159 158 10290 159 158 10291 159 158 10291 159 158 10291 159 1040 48,220 241 241 241 241 241 48,220			
165 10269 247,261 238 10271 247,261 238 10272 247,261 238 10273 247,261 238 10274 247,261 238 10275 247,261 238 10276 247,261 238 238 247,261 238 10279 247,261 238 10279 247,261 238 10280 159 238 10280 159 238 10280 159 159 10280 159 159 10285 159 158 10287 159 158 10290 159 158 10291 159 158 10291 159 158 10294 159 159 10298 159 160 10494 159 10402 48,220 10411 48,220 10412 48,220 10413 48,220 10414 48,220 10415 48,220 10416 48,220 10417 48,220 10418 48,220 10419 <td></td> <td>10267</td> <td></td>		10267	
238 10269 247,261 238 238 10271 247,261 238 10272 247,261 238 10273 247,261 238 10275 247,261 238 10276 247,261 238 10279 247,261 238 10279 247,261 238 10280 159 238 10280 159 238 10280 159 238 10280 159 238 10280 159 10280 159 10285 159 10281 159 10288 159 10283 159 10288 159 10849 159 10290 159 1089 159 10291 159 1080 159 10299 159 1009 10499 159 1049 10411 48,220 10414 48,220 10412		10268	247,261
238 10271 247,261 238 10272 247,261 238 10274 247,261 238 10275 247,261 238 10276 247,261 238 10277 247,261 238 10279 247,261 238 10279 247,261 238 10280 159 238 10280 159 238 10280 159 10280 159 10285 159 159 10286 159 159 10287 159 1028 159 10289 159 158 10290 159 158 10291 159 158 10291 159 158 10291 159 160 10494 159 1049 159 159 160 10411 48,220 10412 48,220 10413 48,220<		10269	247,261
238 10272 247,261 238 238 10274 247,261 238 10275 247,261 238 10276 247,261 238 10277 247,261 238 238 247,261 238 10279 247,261 238 10280 159 238 10280 159 238 10285 159 159 10286 159 159 10287 159 158 10289 159 158 10290 159 158 10291 159 158 10291 159 160 10298 159 10299 159 10402 10411 48,220 10412 48,220 10413 48,220 10414 48,220 10415 48,220 10416 48,220 10417 48,220		10271	247,261
238 10273 247,261 238 10274 247,261 238 10276 247,261 238 10277 247,261 238 10278 247,261 238 10279 247,261 238 10280 159 238 10280 159 238 10286 159 159 10286 159 159 10288 159 158 10290 159 158 10291 159 158 10294 159 158 10295 159 160 10298 159 160 10494 159 10299 159 10299 160 10411 48,220 10412 48,220 10413 48,220 10414 48,220 10415 48,220 10416 48,220 10417 48,220 10		10272	247,261
238 102/4 247,261 238 10275 247,261 238 10276 247,261 238 10277 247,261 238 10279 247,261 238 10279 247,261 238 10280 159 238 10285 159 159 10286 159 159 10287 159 158 10289 159 158 10290 159 158 10291 159 158 10291 159 158 10294 159 159 10299 159 160 10494 159 10295 159 10299 159 10402 48,220 10412 48,220 10411 48,220 10413 48,220 10412 48,220 10414 48,220 10413 48,220 10416 48,220 10416		10273	247,261
238 10275 247,261 238 10276 247,261 238 10277 247,261 238 238 247,261 238 10280 159 238 10280 159 238 10285 159 159 10287 159 159 10287 159 158 10289 159 158 10290 159 158 10291 159 158 10294 159 158 10295 159 160 10298 159 159 10299 159 10402 48,220 10411 48,220 10412 48,220 10413 48,220 10414 48,220 10415 48,220 10416 48,220 10417 48,220 10418 48,220 10419 48,220 10410		10274	247,261
238 10276 247,261 238 10277 247,261 238 10279 247,261 238 10280 159 238 10285 159 238 10285 159 159 10286 159 159 10287 159 158 159 10288 159 158 10290 159 158 10291 159 158 10294 159 158 10295 159 160 10298 159 10298 159 10298 159 10299 159 10299 159 10402 48,220 10412 48,220 10411 48,220 10413 48,220 10412 48,220 10414 48,220 10414 48,220 10416 48,220 10415 48,220 10418 48,220 10416 48,220		10275	247,261
238 10277 247,261 238 238 247,261 238 10279 247,261 238 10280 159 238 10285 159 159 10286 159 159 10287 159 158 10289 159 158 10290 159 158 10291 159 158 10294 159 159 10299 159 160 10492 48,220 160 10412 48,220 10412 48,220 10413 48,220 10414 48,220 10415 48,220 10416 48,220 10417 48,220 10418 48,220 10419 48,220 10410 48,220 10411 48,220 10412 48,220 10413 48,220 10414 48,220		10276	247,261
238 102/8 247,261 238 238 10280 159 238 10285 159 159 10287 159 159 10287 159 159 10287 159 158 10289 159 158 10290 159 158 10291 159 158 10294 159 158 10295 159 160 10298 159 160 10499 159 10402 48,220 10411 48,220 10412 48,220 10413 48,220 10414 48,220 10415 48,220 10416 48,220 10417 48,220 10418 48,220 10419 48,220 10410 48,220 10411 48,220 10412 48,220 10413 48,220		10277	247,261
238 10279 247,261 238 159 159 159 10285 159 159 10286 159 159 10287 159 158 10289 159 158 10290 159 158 10291 159 158 10294 159 158 10295 159 160 10298 159 160 10402 48,220 160 10411 48,220 10412 48,220 10413 48,220 10414 48,220 10415 48,220 10416 48,220 10417 48,220 10418 48,220 10419 48,220 10410 48,220 10411 48,220 10412 48,220 10413 48,220 10414 48,220 10416 48,220 <td< td=""><td></td><td>10278</td><td>247,261</td></td<>		10278	247,261
238 10280 159 238 10285 159 159 10286 159 159 10287 159 158 10289 159 158 10290 159 158 10291 159 158 10294 159 158 10295 159 160 10298 159 160 10402 48,220 160 10411 48,220 241 241 10412 48,220 10413 48,220 10415 48,220 10414 48,220 10415 48,220 10415 48,220 10416 48,220 10416 48,220 10418 48,220 10417 48,220 10418 48,220 10418 48,220 10418 48,220 10419 48,220 10422 239 159 10425 239 10426 239 <td></td> <td>10279</td> <td>247,261</td>		10279	247,261
238 10285 159 159 10287 159 159 10287 159 158 10289 159 158 10290 159 158 10291 159 158 10294 159 158 10295 159 160 10298 159 159 10299 159 160 10402 48,220 160 10411 48,220 10412 48,220 10413 48,220 10414 48,220 10415 48,220 10416 48,220 10417 48,220 10418 48,220 10419 48,220 10410 48,220 10411 48,220 10412 48,220 10413 48,220 10414 48,220 10415 48,220 10416 48,220 10417		10280	159
159 10286 159 159 159 10287 159 158 158 10290 159 158 10291 159 158 10294 159 158 10295 159 160 159 10298 159 160 10402 48,220 160 10411 48,220 10412 48,220 10413 48,220 10414 48,220 10415 48,220 10416 48,220 10417 48,220 10418 48,220 10419 48,220 10410 48,220 10411 48,220 10412 48,220 10413 48,220 10414 48,220 10415 48,220 10416 48,220 10417 48,220 10418 48,220 10429 10422 239		10285	159
159 1028/ 159 158 10289 159 158 10290 159 158 10291 159 158 10294 159 158 10295 159 160 10298 159 160 10402 48,220 160 10411 48,220 241 10412 48,220 10413 48,220 10414 48,220 10415 48,220 10416 48,220 10417 48,220 10418 48,220 10419 48,220 10410 48,220 10411 48,220 10412 48,220 10415 48,220 10416 48,220 10417 48,220 10418 48,220 10419 48,220 10420 239 10421 239 10422 239		10286	159
158 10288 159 158 10290 159 158 10291 159 158 10294 159 158 10295 159 160 10298 159 159 10299 159 160 10402 48,220 241 241 48,220 241,258 10412 48,220 10413 48,220 10414 48,220 10414 48,220 10415 48,220 10415 48,220 10416 48,220 10416 48,220 10416 48,220 10417 48,220 10418 48,220 10418 48,220 10418 48,220 10419 48,220 10428 239 159 10422 239 159 10425 239 159 10426 239 159 10439 162 10441 162 <t< td=""><td></td><td>10287</td><td>159</td></t<>		10287	159
158 10289 159 158 10290 159 158 10294 159 158 10295 159 160 10298 159 159 10299 159 160 10411 48,220 10412 48,220 10413 48,220 10414 48,220 10415 48,220 10416 48,220 10417 48,220 10418 48,220 10419 48,220 10410 48,220 10411 48,220 10412 239 10414 48,220 10415 48,220 10416 48,220 10417 48,220 10418 48,220 10419 48,220 10420 239 10422 239 10425 239 10439 162 10441 162 <t< td=""><td></td><td>10288</td><td>159</td></t<>		10288	159
158 10290 159 158 10291 159 158 10294 159 160 10298 159 159 10299 159 160 10402 48,220 160 10411 48,220 241 10412 48,220 241 10413 48,220 10414 48,220 10415 48,220 10415 48,220 10416 48,220 10416 48,220 10417 48,220 10417 48,220 10418 48,220 10418 48,220 10418 48,220 10419 48,220 10418 48,220 10419 48,220 10419 48,220 10419 48,220 1042 239 159 10425 239 10425 239 159 10439 162 10441 162 10431 162 10441 162 10444	158	10289	159
158 10291 159 158 10294 159 160 10298 159 159 10299 159 160 10402 48,220 241 10412 48,220 241 10412 48,220 241,258 10415 48,220 241,258 10415 48,220 241,258 10416 48,220 241,258 10417 48,220 10418 48,220 10419 48,220 10419 48,220 10419 48,220 10410 48,220 10411 48,220 10412 239 10413 48,220 10414 48,220 10415 48,220 10416 48,220 10417 48,220 10420 239 10421 10422 239 10422 239 10439 162 10441 162 10443 162 10445 56,160,162 10452 19,56 10453 19,56 10454 19,56	158	10290	159
158 10294 159 160 10298 159 159 10299 159 160 10402 48,220 160 10411 48,220 241 10412 48,220 241 10413 48,220 241,258 10415 48,220 241,258 10416 48,220 241,258 10417 48,220 241,258 10418 48,220 241,258 10419 48,220 10418 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10420 239 10421 10422 239 10422 239 10439 162 10441 162 10443 162 10445 56,160,162 10452 19,56 10453 19,56 10454 19,56	158	10291	159
160 10295 159 159 10299 159 160 10402 48,220 160 10411 48,220 241 10412 48,220 241 10413 48,220 241,258 10415 48,220 241,258 10416 48,220 241,258 10417 48,220 241,258 10418 48,220 241,258 10419 48,220 10418 48,220 10419 48,220 10419 48,220 10419 48,220 10420 239 10421 239 10422 239 10423 162 10441 162 10439 162 10441 162 10443 162 10445 56,160,162 10452 19,56 10453 19,56 10454 19,56	158	10294	159
159 160 160 160 160 161 160 160 10402 48,220 10411 48,220 10412 241 241 241 241 241,258 241,258 241,258 241,258 241,258 241,258 10416 48,220 10417 48,220 10418 48,220 10418 48,220 10419 48,220 10419 48,220 10419 10425 239 10426 239 10426 239 10439 162 163,171 239 10441 162 10443 162 10443 162 10443 162 10443 162 10454 19,56	158	10295	159
160 10299 159 160 10402 48,220 10411 48,220 10412 48,220 10413 48,220 10414 48,220 10415 48,220 10416 48,220 10417 48,220 10418 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10420 239 10421 239 10422 239 10439 162 10441 162 10443 162 10445 56,160,162 10452 19,56 10454 19,56 10454 19,56	160	10298	159
160	159	10299	159
241 10411 48,220 241 10412 48,220 10413 48,220 10414 48,220 10415 48,220 10416 48,220 10417 48,220 10418 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10419 48,220 10420 239 10421 239 10422 239 10439 162 10441 162 10443 162 10443 162 10445 56,160,162 10452 19,56 10453 19,56 10454 19,56	160	10402	48,220
241 241 241 241 241 241,258 241,258 241,258 241,258 241,258 241,258 241,258 241,258 241,258 241,258 241,258 10416 48,220 10417 48,220 10418 48,220 10419 48,220 10419 48,220 10419 239 10422 239 10422 239 10425 239 10426 239 10439 162 159 163,171 239 10441 162 10443 162 10443 162 10443 162 10445 10454 19,56	160	10411	48,220
241 10413 48,220 241,258 10414 48,220 241,258 10415 48,220 241,258 10416 48,220 241,258 10417 48,220 241,258 10418 48,220 241,258 10419 48,220 10419 48,220 10422 239 159 10425 239 159 10426 239 159 10439 162 163,171 10443 162 239 10445 56,160,162 10452 19,56 10453 19,56 10454 19,56	241	10412	48,220
241 10414 48,220 241,258 10415 48,220 241,258 10416 48,220 241,258 10417 48,220 241,258 10418 48,220 241,258 10419 48,220 159 10422 239 159 10425 239 159 10439 162 159 10441 162 163,171 239 10443 162 239 10445 56,160,162 10452 19,56 160,234 10453 19,56 244 10454 19,56	241		
241,258 241,258 241,258 241,258 241,258 241,258 241,258 241,258 159 159 159 159 159 159 159 159 163,171 239 160,234 246,260 244	241		
241,258 241,258 241,258 241,258 241,258 241,258 241,258 159 159 159 159 159 159 159 159 159 159 159 10426 239 10439 162 10441 162 10443 162 10445 56,160,162 10452 19,56 10453 19,56 10454 19,56	241,258		
241,258 241,258 241,258 241,258 159 159 159 159 159 159 159 159 159 163,171 239 163,171 239 160,234 246,260 244	241,258		
241,258 241,258 241,258 159 159 159 159 159 159 159 159 159 163,171 239 10441 162 10443 162 10445 56,160,162 10452 19,56 10453 19,56 10454 19,56	241,258		
241,258 10419 48,220 241,258 10422 239 159 10425 239 159 10426 239 159 10439 162 163,171 10441 162 239 10445 56,160,162 239 10452 19,56 160,234 10453 19,56 244 10454 19,56	241,258		
241,258 10422 239 159 10425 239 159 10426 239 159 10439 162 159 10441 162 163,171 239 10443 162 239 10445 56,160,162 239 10452 19,56 160,234 10453 19,56 244 10454 19,56	241,258		•
159 10425 239 159 10426 239 159 10439 162 163,171 10441 162 239 10445 56,160,162 239 10452 19,56 160,234 10453 19,56 244 10454 19,56	241,258		
159 159 159 10439 162 10441 162 10441 162 10443 162 10443 162 10445 56,160,162 10452 19,56 10453 19,56 10454 19,56	159		
159 159 163,171 239 160,234 244 10439 162 10441 162 10443 162 10445 56,160,162 19,56 10453 19,56 10454 19,56	159		
159 163,171 239 10443 162 10443 162 10445 56,160,162 10452 19,56 10453 19,56 10454 19,56	159		
163,171 10443 162 239 10445 56,160,162 239 10452 19,56 160,234 10453 19,56 246,260 10454 19,56	159		
239 10445 56,160,162 239 10452 19,56 10453 19,56 246,260 244	163,171		
239 160,234 246,260 244 10453 10453 19,56 10454 19,56			
160,234 246,260 244 10452 19,56 10453 19,56			
10453 19,56 246,260 244 19,56			-
244	-		
10455 19,57	-		
		10455	19,57

Part No.	Page No.
10456	19,57
10457	19,57
10458	19
10459	19,57
10460	19,57
10464	34,56
10466	34,56
10468	34,56
10470	34,56
10475	162
10480	162
10482	162
10485	19,57
10486	19,57
10487	19,57
10488	19,57
10489	19,57
10490	19
10510	163
10512	163
10513	163
10516	58, 168, 234
10518	58, 168, 234
10526	241
10527	241
10530	241, 261
10531	241
10531	261
10532	241
10532	261
10534	241
10534	261
10535	91
10535	228
10538	89
10538	228
10540	244
10550	243
10551	243
10555	60
10555	244
10561	244
10562	244
10565	243
10566	243
L	

10568 10569 10570	243
10570	242
	243
10571	243
10572	243
10574	243
10575	243
10576	243
10577	243
10580	247,261
10582	247,261
10584	247,261
10586	247,261
10590	246,290
10600	240
10605	240
10625	173, 239
10640	58, 237
10642	58, 237
10644	58, 237
10655	178, 241
10658	198, 249
10660	185, 248
10662	185, 248
10672	248
10675	248
10676	248
10678	119, 212, 248
10680	64, 234
10720	173, 248
10721	173, 248
10722	173, 248
10723	173, 248
10725	197, 249
10726	197, 249
10730	173
10731	173
10741	48, 220
10742	48, 220
10744	48, 220
10752	248
10770	178, 246, 260
10772	246, 260
10780	178,247, 261

Part No. Page No. 10567 243



Part No.	Page No.
10781	178,247, 261
10782	178,247, 261
10783	178,247, 261
10784	178,247, 261
10785	178,247, 261
10786	178,247, 261
10787	178,247, 261
10788	178,247, 261
10790	178,247, 261
10791	178,247, 261
10792	178,247, 261
10793	247, 261
10794	178,247, 261
10795	178,247, 261
10796	178,247, 261
10797	178,247, 261
10798	178,247, 261
11000	225
11002	225
11003	73, 233
11005	107, 233
11008	107, 224
11010	31, 130, 225
11011	31, 130, 225
11015	31, 130, 225
11017	35, 61, 226
11018	35, 61, 226
11019	35, 61, 226
11020	29, 226
11022	29
11023	221
11024	221
11026	226
11026	29, 226

Part No.	Page No.	
11030	10, 220	
11031	10, 220	
11036	10,48,220	
11037	224	
11038	224	
11039	224	
11040	11,76, 221	
11041	11,76, 221	
11045	258	
11045	221, 258	
11052	97, 229	
11056	224	
11057	224	
11058	224	
11059	224	
11060	224	
11061	224	
11062	224	
11063	224	
11064	224	
11065	224	
11066	224	
11067	224	
11068	224	
11069	224	
11070	11, 220	
11072	11, 220	
11074	11, 220	
11075	11, 220	
11076	11, 220	
11078	11, 220	
11080	225	
11081	225	
11082	225	
11083	225	
11085	225	
11086	225	
11087	225	
11100	232	
11106	232	
11108	232	
11110	232	
11112	232	
11116	232	
11118	232	
11120	232	
11124	232	

Part No.	Page No.
11126	232
11128	232
11130	232
11132	232
11134	232
11151	232
11152	232
11153	232
11160	250
11161	250
11170	189, 223
11172	189, 223
11174	188, 223
11176	223
11177	223
11178	230
11179	230
11180	230
11181	230
11182	187, 223, 248
11184	223
11190	188, 248
11195	232
11196	232
11197	232
11270	240
11271	240
11272	240
11273	240
11274	240
11275	240
11276	240
11280	240
11300	240
11301	240
11302	240
11303	240
11310	240
11312	240
11315	240
11316	240
11317	240
11318	240
11319	240
11320	240
11350	150, 250

11360 150, 250 12000 160, 234 12005 59, 236 12008 59, 236 12010 59, 236 12011 59, 236 12012 59, 236 12013 239 12016 59, 236 12017 236 12024 60, 234 12025 60, 234 12026 60, 234 12027 60, 234 12030 154,177, 237, 251 12031 154,177, 237, 251 12032 154,177, 237, 251 12033 154,177, 237, 251 12033 154,177, 237 12035 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12057 242, 262 12066 10,35 12066 10,35	Part No.	Page No.
12005 59, 236 12006 59, 236 12008 59, 236 12010 59, 236 12011 59, 236 12012 59, 236 12013 239 12016 59, 236 12017 236 12024 60, 234 12025 60, 234 12026 60, 234 12027 60, 234 12030 154,177, 237, 251 12031 154,177, 237, 251 12032 154,177, 237, 251 12033 154,177, 237, 251 12034 12050 12055 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12067 242, 262 12061 10,221 12066 10,35 12066 157, 221 <td>11360</td> <td>150, 250</td>	11360	150, 250
12006 59, 236 12008 59, 236 12010 59, 236 12011 59, 236 12012 59, 236 12013 239 12016 59, 236 12017 236 12024 60, 234 12025 60, 234 12026 60, 234 12027 60, 234 12030 154,177, 237, 251 12031 154,177, 237, 251 12032 154,177, 237, 251 12033 154,177, 237, 251 12034 154,177, 237, 251 12035 59, 237 12036 242, 262 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12066 10,35 12066 10,35 12066 157, 221 12070 97, 229 <td>12000</td> <td>160, 234</td>	12000	160, 234
12008 59, 236 12010 59, 236 12011 59, 236 12012 59, 236 12013 239 12016 59, 236 12017 236 12024 60, 234 12025 60, 234 12026 60, 234 12027 60, 234 12030 154,177, 237, 251 12031 154,177, 237, 251 12032 154,177, 237 12033 154,177, 237 12035 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12057 242, 262 12060 242, 262 12061 10,35 12066 157, 221 12070 97, 229 12072 10, 242 12073 242	12005	59, 236
12010 59, 236 12011 59, 236 12012 59, 236 12013 239 12016 59, 236 12017 236 12024 60, 234 12025 60, 234 12027 60, 234 12030 154,177, 237, 251 12031 154,177, 237, 251 12032 154,177, 237, 251 12033 154,177, 237 12035 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12057 242, 262 12060 242, 262 12061 242, 262 12062 10,221 12066 10,35 12066 10,35 12066 10,35 12072 10, 242 12073 242	12006	59, 236
12011 59, 236 12012 59, 236 12013 239 12016 59, 236 12017 236 12024 60, 234 12025 60, 234 12026 60, 234 12027 60, 234 12030 154,177, 237, 251 12031 154,177, 237, 251 12032 154,177, 237, 251 12033 154,177, 237, 251 12035 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12057 242, 262 12060 242, 262 12061 242, 262 12062 1242, 262 12063 157, 221 12066 157, 221 12070 97, 229 12072 10, 242 12073 242	12008	59, 236
12012 59, 236 12013 239 12016 59, 236 12017 236 12024 60, 234 12025 60, 234 12027 60, 234 12028 154, 177, 237, 251 12030 154, 177, 237, 251 12031 154, 177, 237, 251 12032 154, 177, 237 12033 154, 177, 237 12035 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12057 242, 262 12060 242, 262 12061 242, 262 12062 10,35 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12073 242 12073 242	12010	59, 236
12013 239 12016 59, 236 12017 236 12024 60, 234 12025 60, 234 12027 60, 234 12030 154,177, 237, 251 12031 154,177, 237, 251 12032 154,177, 237, 251 12033 154,177, 237 237 12035 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12066 242, 262 12061 242, 262 12062 242, 262 12063 242, 262 12064 10,221 12065 157, 221 12070 97, 229 12072 10, 242 12073 242 12073 242 12070 224 12101 224	12011	59, 236
12016 59, 236 12017 236 12024 60, 234 12025 60, 234 12027 60, 234 12027 60, 234 12027 60, 234 12030 154,177, 237, 251 12031 154,177, 237, 251 12032 154,177, 237, 251 12033 154,177, 237 12035 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12060 242, 262 12061 242, 262 12062 10,35 12063 157, 221 12064 10,221 12065 157, 221 12070 97, 229 12072 10, 242 12073 242 12073 242 12101 224 <tr< td=""><td>12012</td><td>59, 236</td></tr<>	12012	59, 236
12017 236 12024 60, 234 12025 60, 234 12027 60, 234 12027 60, 234 12030 154,177, 237, 251 12031 154,177, 237, 251 12032 154,177, 237, 251 12033 154,177, 237 12035 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12060 242, 262 12061 242, 262 12062 1207 242, 262 12066 10,35 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12101 224 12102 224 12103 224 12105 224 12105 224 </td <td>12013</td> <td>239</td>	12013	239
12024 60, 234 12025 60, 234 12026 60, 234 12027 60, 234 12030 154,177, 237, 251 12031 154,177, 237, 251 12032 154,177, 237, 251 12033 154,177, 237 12035 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12060 242, 262 12061 242, 262 12062 10,35 12063 157, 221 12064 10,221 12065 157, 221 12070 97, 229 12072 10, 242 12073 242 12073 242 12100 224 12101 224 12102 224 12103 224	12016	59, 236
12025 60, 234 12026 60, 234 12027 60, 234 12030 154,177, 237, 251 12031 154,177, 237, 251 12032 154,177, 237, 251 12033 154,177, 237 12035 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12060 242, 262 12061 242, 262 12063 10,221 12064 10,221 12065 157, 221 12070 97, 229 12072 10, 242 12073 242 12073 242 12100 224 12101 224 12102 224 12105 224 12106 224	12017	236
12026 60, 234 12027 60, 234 12030 154,177, 237, 251 12031 154,177, 237, 251 12032 154,177, 237, 251 12033 154,177, 237 12035 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12060 242, 262 12061 242, 262 12064 10,221 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12070 224 12100 224 12101 224 12102 224 12105 224 12106 224	12024	60, 234
12027 60, 234 12030 154,177, 237, 251 12031 154,177, 237, 251 12032 154,177, 237, 251 12033 154,177, 237 12035 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12060 242, 262 12061 242, 262 12064 10,221 12066 10,35 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12073 10, 242 12100 224 12101 224 12102 224 12105 224 12106 224	12025	60, 234
12030 154,177, 237, 251 12031 154,177, 237, 251 12032 154,177, 237, 251 12033 154,177, 237 12035 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12060 242, 262 12061 242, 262 12064 10,221 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12073 10, 242 12100 224 12101 224 12102 224 12105 224 12106 224	12026	60, 234
237, 251 12031	12027	60, 234
12031 154,177, 237, 251 12032 154,177, 237, 251 12033 154,177, 237 12035 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12060 242, 262 12061 242, 262 12064 10,221 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12070 224 12100 224 12101 224 12102 224 12103 224 12106 224	12030	154,177, 237, 251
12032 237, 251 12033 154,177, 237 12035 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12060 242, 262 12061 242, 262 12064 10,221 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12031	154,177,
12033 237 12035 59, 237 12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12060 242, 262 12061 242, 262 12064 10,221 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12032	
12050 242, 262 12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12060 242, 262 12061 242, 262 12064 10,221 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12033	
12051 242, 262 12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12060 242, 262 12061 242, 262 12064 10,221 12066 157, 221 12070 97, 229 12073 242 12073 242 12100 224 12101 224 12102 224 12103 224 12106 224 12105 224 12106 224	12035	59, 237
12052 242, 262 12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12060 242, 262 12061 242, 262 12064 10,221 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12050	242, 262
12053 242, 262 12054 242, 262 12055 242, 262 12056 242, 262 12057 242, 262 12060 242, 262 12061 242, 262 12064 10,221 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12051	242, 262
12054 242, 262 12055 242, 262 12056 242, 262 12057 242, 262 12060 242, 262 12061 242, 262 12064 10,221 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12052	242, 262
12055 242, 262 12056 242, 262 12057 242, 262 12060 242, 262 12061 242, 262 12064 10,221 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12053	242, 262
12056 242, 262 12057 242, 262 12060 242, 262 12061 242, 262 12064 10,221 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12054	242, 262
12057 242, 262 12060 242, 262 12061 242, 262 12064 10,221 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12073 10, 242 12100 224 12101 224 12102 224 12103 224 12103 224 12105 224 12106 224	12055	242, 262
12060 242, 262 12061 242, 262 12064 10,221 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12070 224 12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12056	242, 262
12061 242, 262 12064 10,221 12066 10,35 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12057	242, 262
12064 10,221 12066 10,35 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12073 10, 242 12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12060	242, 262
12066 10,35 12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12073 10, 242 12100 224 12101 224 12102 224 12103 224 12103 224 12105 224 12106 224	12061	242, 262
12066 157, 221 12070 97, 229 12072 10, 242 12073 242 12073 10, 242 12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12064	10,221
12070 97, 229 12072 10, 242 12073 242 12073 10, 242 12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12066	10,35
12072 10, 242 12073 242 12073 10, 242 12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12066	157, 221
12073 242 12073 10, 242 12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12070	97, 229
12073 10, 242 12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12072	10, 242
12100 224 12101 224 12102 224 12103 224 12105 224 12106 224	12073	242
12101 224 12102 224 12103 224 12105 224 12106 224	12073	10, 242
12102 224 12103 224 12105 224 12106 224	12100	224
12103 224 12105 224 12106 224	12101	224
12105 224 12106 224	12102	224
12106 224	12103	224
	12105	224
12107 224	12106	224
	12107	224

Part No.	Page No.	
12121	224	
12122	224	
12123	224	
12130	224	
12131	224	
12132	224	
12200	237	
12201	237	
12202	237	
12203	237	
12204	237	
12210	241	
12211	198, 249	
12212	198,249	
12213	249	
12214	169, 237	
12215	198, 249	
12216	63, 164, 234	
12219	236	
12220	236	
12259	242, 262	
12260	242, 262	
12264	237	
12265	237	
12268	237	
12269	152, 176, 251	
13000	161	
13001	161	
13004	161	
13007	161	
13008	26	
13009	26	
13010	26	
13011	161	
13012	161	
13014	161	
13018	161	
13020	161	
13021	161	
13022	161	
13025	161	
13100	160	
13104	160	
13106	160	
13107	160	

Part No.	Page No.
13108	160
13109	160
13115	226
14100	158
14101	158
14102	158
14103	158
14104	158
14105	158
14106	158
14110	158
14111	158
14112	158
14115	158
14116	76, 107, 233
14117	76, 107, 233
14120	76, 107, 233
14122	76, 107, 233
14123	76, 107, 233
14124	76, 107, 233
14125	76, 107, 233
14126	76, 107, 233
14127	76, 107, 233
14128	76, 107, 233
14129	76, 107, 233
14130	76, 107, 233
14132	76, 107, 233
14133	76, 107, 233
14134	76, 107, 233
14135	76, 107, 233
14136	76, 107, 233
14137	76, 107, 233
14138	76, 107, 233
14139	107, 233



Part No. 14139 14140 14141 14142	76, 107, 233 106, 235
14140 14141 14142	
14141 14142	106, 235
14142	100 225
	106, 235
1/1/1/2	106, 235
14143 14145	106, 235
14145	106, 235
14147	106, 235
14148	235
14148	106, 235
14149	235
14150	106, 235
14151	106, 235
14152	106, 235
14153	106, 235
14154	106, 235
14155	106, 235
14156	106, 235
14157	106, 235
14158	106, 235
14159	235
14159	106, 235
14160	235
14161	235
14162	106, 235
14163	235
14165	235
14166	151, 157, 177, 251
14170	168, 231
14171	157, 177, 251
14172	230
14173	230
14174	230
14175	235
14190	57
14192	48, 220
14193	48, 220
14194	48, 220
14195	48, 220
14196	48, 220
14197	48, 220
14198	43, 158
14200	72
14201	72
14230	99, 232

	Page No.	
14232	99, 232	
14235	236	
14236	236	
14237	236	
14240	235	
14242	235	
14245	106, 235	
14246	106, 235	
14247	106, 235	
14248	106, 235	
14251	106, 235	
14252	106, 235	
14253	106, 235	
14254	106, 235	
14255	106, 235	
14261	106, 235	
14263	106, 235	
14270	235	
14272	235	
14275	235	
14276	235	
14277	235	
14280	75, 236	
14282	236	
14285	236	
14288	236	
14290	230, 254	
14292	254	
14292	230, 254	
14295	255	
14300	225	
14305	225	
14306	225	
14350	152, 176, 251	
14351	152, 176, 251	
14352	152, 176, 251	
14355	151, 176, 251	
14360	75, 113, 233	
14361	75, 113, 233	
14365	75, 113, 233	
14366	75, 113, 233	
14380	107, 233	

Part No.	Page No.	
14381	107, 233	
14383	107, 233	
14385	107, 233	
14390	76	
14390	233	
14390	107, 233	
14391	76, 107,233	
14392	76, 107,233	
14395	76, 107,233	
14396	76, 107,233	
14408	56	
14409	56	
14414	56	
14415	56	
14418	56	
14419	56	
14422	56	
14423	56	
14430	56	
14431	56	
14436	56	
14437	56	
14450	56	
14451	56	
14452	56	
14453	56	
14454	56	
14455	56	
14456	56	
14457	56	
14458	56	
14459	56	
14474	56	
14475	56	
14480	52	
14480	56	
14481	52,56	
14483	52,56	
14485	52,56	
14486	52,56	
16000	117	
16001	117	
16002	117	
16003	117	
10005	117	

Part No.	Page No.
16004	117
16005	117
16006	117
16011	117
16012	117
16013	117
16014	117
16015	117
16016	117
16020	117
16021	117
16022	117
16023	117
16024	117
16025	117
16026	117
16030	117
16031	117
16032	117
16033	117
16034	117
16035	117
16036	117
16041	117
16042	117
16043	117
16044	117
16045	117
16050	117
16051	117
16052	117
16053	117
16054	117
16055	117
16056	117
16060	117
16061	117
16062	117
16063	117
16064	117
16065	117
16066	117
16070	117
16070	117
	117
16072	
16073	117
16074	117

i di tito.	Page No.
16075	117
16076	117
16080	117
16081	117
16082	117
16083	117
16084	117
16085	117
16086	117
16100	117
16101	117
16102	117
16103	117
16104	117
16105	117
16106	117
16110	117
16111	117
16112	117
16113	117
16114	117
16115	117
16116	117
16120	117
16121	117
16122	117
16123	117
16124	117
16125	117
16126	117
16130	117
16131	117
16132	117
16133	117
16134	117
16150	117
16151	117
16152	117
16153	117
16154	117
16201	116
16202	116
16203	116
16204	116
	116
16205	110
16205 16206	116

Part No.	Page No.
16210	116
16211	116
16212	116
16213	116
16214	116
16221	116
16222	116
16223	116
16224	116
16225	116
16226	116
16228	116
16241	116
16242	116
16243	116
16244	116
16245	116
16246	116
16248	116
16250	116
16252	116
16254	116
16256	116
16258	116
16262	116
16263	116
16264	116
16265	116
16266	116
16268	116
16270	116
16271	116
16272	116
16273	116
16281	116
16282	116
16283	116
16284	116
16285	116
16286	116
16287	116
16288	116
16289	116
16290	116
16291	116
16292	116
16293	116



Part No.	Page No.		Page No.
16294	116	16538	116
16296	116	16540	116
16298	116	16541	116
16316	116	16542	116
16318	116	16544	116
16320	116	16546	116
16321	116	16550	114
16322	116	16552	114
16324	116	16553	114
16326	116	16554	114
16336	116	16555	114
16338	116	16731	115
16340	116	16732	115
16342	116	16734	115
16344	116	16736	115
16346	116	16741	115
16347	116	16742	115
16348	116	16744	115
16349	116	16746	115
16350	116	16751	115
16402	116	16752	115
16404	116	16754	115
16406	116	16756	115
16422	116	16762	115
16424	116	16764	115
16426	116	16766	115
16442	116	16772	115
16446	116	16774	115
16462	116	16776	115
16464	116	16902	115
16466	116	16903	115
16468	116	16905	115
16470	116	16907	115
16472	116	16914	115
16474	116	16920	115
16476	116	16922	115
16482	116	16924	115
16484	116	16925	115
16486	116	16930	115
16488	116	16936	115
16490	116, 193	16938	115
16492	116	16940	115
16494	116	16941	115
16518	116	16944	115
16520	116	16946	115
16522	116	17000	175, 257
16536	116	17004	175

Part No.	Page No.
17006	175
17008	167, 175
17010	175
17012	175
17016	168, 175
17020	174
17022	176
17026	171, 176
17028	169, 176
17030	176
17032	172, 176
17034	173, 176
17036	169, 176
17038	169, 176
17048	117, 176
17120	119, 204
17121	119, 204, 116
17222	116
17223	116
17264	116
17285	116
17286	116
17287	116
17288	116
17289	116
17290	116
17291	116
17315	116
17316	116
17317	116
17318	116
17463	116
17475	116
17476	116
17486 17488	116 116
17489	_
17489	116 116
17489	116
17490	116
17491	116
17495	116
17496	116
17515	116
17516	116
17517	116

Dout No	Dage No	
17518	Page No.	
17519	116	
17520	116	
17521	116	
17522	116	
17531	116	
17539	116	
17540	116	
17541	116	
17542	116	
17549	116	
17552	116	
18000	104	
18001	104	
18002	104	
18003	104	
18004	104, 118	
18005	104	
18006	104	
18010	104	
18011	104	
18012	104	
18013	104	
18014	104	
18015	104	
18016	104	
18020	104	
18021	104	
18022	104	
18023	104	
18030	104	
18031	104	
18032	104	
18033	104	
18040	104	
18050	104	
18051	104	
18052	104	
18053	104	
18054	104	
18056	104	
18060	105	
18061	105	
18062	105	
18063	105	
18070	105	
18071	105	
10071	103	

Part No.	Page No.	Part No.	Page No.
18074	105	18158	104
18075	105	18162	104
18080	105	18164	104
18081	105	18168	104
18082	105	18170	104
18083	105	18174	104
18084	105	18175	104
18085	105	18176	104
18086	105	18177	104
18087	105	18178	104
18090	105	18180	104
18091	105	18181	104
18092	105	18183	105
18093	105	18184	105
18094	105	18185	105
18095	105	18187	105
18096	105	18188	105
18097	105	18189	105
18098	106	18190	106
18099	106	18191	106
18101	104	18192	106
18103	104	18193	106
18105	104	18194	106
18107	104	18195	106
18109	104	18196	106
18110	105	18197	106
18114	104	18198	106
18116	104	18199	106
18120	104	18200	106
18122	104	18201	106, 221
18126	104	18202	106
18128	104	18203	106, 221
18132	104	18204	106, 221
18134	104	18205	222
18135	104	18206	222
18136	104	18207	11, 222
18137	104	18209	222
18138	104	18210	222
18139	104	18212	222
18141	104	18215	106
18143	104	18216	114
18145	104	18220	105, 222
18147	104	18221	11, 105,
18149	104		222
18151	104	18222	105, 223
18153	104	18223	105, 223
18156	104	18224	105, 223



Part No	Page No.
18225	11, 105,
	222
18226	105, 223
18227	105, 223
18228	105, 223
18230 18232	105, 223
18234	105, 223
18250	117, 212
18251	117, 212
18252	117, 212
18253	117, 212
18254	117, 212
18255	11, 117, 212
18256	11, 117, 212
18257	117, 212
18258	117, 212
18259	117, 212
18260	117, 212
18261	117, 212
18262	117, 212
18263	117, 212
18264	117, 212
18266	117, 212
18274	117, 212
18275	117, 212
18276	117, 212
18277	117, 212
18278	117, 212
18279	117, 212
18280	117, 212
18281	117, 212
18282	117, 212
18283	117, 212
18286	117, 212, 174
18287	117, 212, 174
18288	117, 212
18289	117, 212
18290	117, 212
18291	117, 212
18292	117, 212, 174
18293	117, 212, 174
_	117, 212

Part No.	Page No.
18295	117, 212 117, 174,
18296	212
18297	117, 174, 212
18298	117, 212
18299	117, 212
18300	31, 73, 121, 131
18301	31, 73, 121, 131
18302	73, 121, 131
18303	73, 121, 131
18304	73, 121, 131
18305	73, 121, 131
18306	73, 121, 131
18307	73, 121, 131
18308	73, 121, 131
18309	131
18310	31, 131
18311	31, 131
18312	131
18313	131
18314	131
18315	131
18317	131
18320	31, 121, 131
18321	31, 121, 131
18322	121, 131
18323	121, 131
18325	142, 253
18326	71
18327	71
18330	71, 121, 135
18332	71, 121, 135
18334	71, 121, 135
18336	71, 121, 135
18338	71, 121, 135

Dart No	Dago No.			
Part No.	Page No. 71, 121,			
18340	135			
18342	71, 121, 135			
18344	121			
18345	121			
18347	121			
18349	121			
18350	121			
18351	121			
18352	121			
18353	121			
18354	121			
18355	121			
18360	76, 132			
18362	76, 132			
18363	76, 132			
18364	76, 132			
18365	76, 132			
18366	76, 132			
18367	76, 132			
18368	76, 132			
18430	17			
18431	17			
18432	17			
18433	17			
18434	17			
18435	17			
18436	17			
18437	17			
18438	17			
18439	17			
18442	121			
18444	121			
18446	121			
18448	121			
18452	121			
18454	121			
18460	17, 120			
18461	17, 121			
18462	17, 120			
18463	17, 121			
18468	17, 121			
18470	17			
18472	16, 120			
18473	16, 120			
18476	16, 120			

Part No.	Page No.
18477	16, 120
18478	16, 120
18479	16, 120
18480	16, 120
18481	16, 120
18482	16, 120
18484	16, 120
18487	16, 120
18488	16, 120
18489	16, 120
18491	16, 120
18500	16, 120
18501	16, 120
18502	16, 120
18503	16, 120
18504	16, 120
18506	17, 120
18507	16, 120
18508	16, 120
18509	16, 120
18510	16, 120
18511	16, 120
18512	16, 120
18513	16, 120
18514	16, 120
18515	17, 120
18516	17, 120
18517	17
18518	17
18519	17
18520	16
18521	16
18522	17
18523	17
18524	16, 120
18525	16, 120
18526	16, 120
18527	16, 120
18530	21
18531	21
18532	21
18533	21
18534	21
18540	21
18541	21
18542	21
18543	21

Part No.	Page No.
18544	21
18546	48
18547	115
18548	115
18549	48
18550	48
18551	48
18552	48
18553	15
18553	114
18554	114
18555	114, 117
18556	114, 117
18557	114, 117
18558	114
18559	114
18560	15, 114
18561	15, 114
18564	114
18565	118, 213
18566	118, 213
18567	118, 213
18568	118, 213
18570	54, 118, 213
18571	54, 118, 213
18572	54, 118, 213
18574	54, 118, 213
18576	54, 118, 213
18578	118, 213
18580	54, 118, 213
18582	54, 118, 213
18584	54, 118, 213
18585	118, 213
18586	54, 118, 213
18587	54, 118, 213
18588	54, 118, 213
18589	54, 118, 213
18590	54, 118, 213

Part No.	Page No.
18592	54, 118, 213
18594	54, 118, 213
18595	118, 213
18596	54, 118, 213
18597	54, 118, 213
18598	54, 118, 213
18599	54, 118, 213
18600	185
18601	185
18602	185
18603	185
18604	185
18605	185
18606	185
18607	185
18608	185
18610	54, 118, 213
18611	54, 118, 213
18612	54, 118, 213, 193
18613	54, 118, 213
18615	54, 118, 213
18617	54, 118, 213
18618	54, 118, 213
18619	54, 118, 213
18620	102
18621	102
18622	102
18623	102
18624	102
18626	102
18628	113
18629	113
18630	113
18631	113
18632	113
10032	113
18633	113



Dart No.	Page No.
18638	113
18639	113
18640	19, 115
18641	19, 115
18642	19, 115
18645	19, 115
18646	
18647	19, 115
18650	19, 115 19
18651	115
18651	19, 115
18652	115
18652	19, 115
18654	15, 114
18655	15, 114
18656	114
18658	113
18659	113
18660	113
18661	113
18662	113
18663	113
18664	113
18665	113
18680	113
18681	113
18682	113
18683	113
18684	113
18685	113
18686	113
18687	113
18688	113
18689	113
18690	113
18691	113
18692	113
18693	113
18694	113
18695	113
18696	113
18697	113
18698	113
18699	113
18700	118, 213
18702	118, 213
18706	118, 213

Part No.	Page No.
18708	213
18712	118, 213
18714	118, 213
18716	118, 213
18740	118, 213
18742	118, 213
18744	118, 213
18746	118, 213
18760	118, 213
18762	118, 213
18764	118, 213
18766	118, 213
18785	118, 213
18786	118, 213
18787	213
18787	118, 213
18790	55, 213, 218
18792	55, 213, 218
18800	118
18802	118
18806	118
18808	118
18810	118
18812	118
18814	118
18816	118
18818	118
18820	118
18822	118
18824	118
18826	118
18828	118
18830	118
18832	118
18834	118
18836	118
18838	118
18840	114
18841	114
18845	114
18846	114
18847	114
18848	114
18849	114

	Page No.
18851	114
18852	114
18853	114
18854	114
18985	110, 167
18986	110, 167
18990	21, 108
18991	108
18992	108
18993	108
18996	108
18997	108
18998	108
18999	108
19000	108
19001	108
19002	108
19003	108
19004	108
19005	108
19006	108
19008	108
19010	108
19012	108
19046	108
19048	108
19050	108
19052	108
19056	108
19058	108
19060	108
19062	108
19064	108
19066	108
19068	108
19070	108
19071	109
19072	109
19073	109
19073	109
19075	109
19075	109
19076	109
19077	109
19100	108
19101	108

Part No.	Page No.	Part No.
19103	108	19186
19110	108	19188
19112	108	19190
19113	108	19192
19114	108	19200
19115	108	19202
19116	108	19210
19117	108	19211
19118	108	19212
19128	108	19213
19129	108	19214
19130	108	19215
19131	108	19216
19132	108	19218
19133	108	19220
19134	108	19221
19135	108	19222
19136	108	19223
19137	108	19224
19138	108	19225
19139	108	19226
19140	108	19227
19141	108	19228
19142	108	19229
19143	108	19230
19144	108	19231
19145	108	19232
19152	109	19233
19153	109	19236
19154	109	19238
19155	109	19240
19162	109	19241
19163	109	19242
19164	109	19243
19165	109	19250
19168	109	19252
19169	109	19256
19170	109	19257
19171	109	19258
19172	109	19259
19173	109	19260
19176	109	19261
19177	109	19262
19178	109	19263
19179	109	19266
19180	109	19267
19181	109	19268

art No.	Page No.	Part No.	Page No
19186	108	19269	108
19188	108	19270	108
19190	108	19271	108
19192	108	19272	108
19200	108	19274	108
19202	108	19275	108
19210	108	19276	109
19211	109	19277	109
19212	108	19278	109
19213	109	19279	109
19214	109	19280	109
19215	109	19281	109
19216	109	19282	109
19218	109	19283	109
19220	109	19284	109
19221	109	19285	109
19222	109	19286	109
19223	109	19287	109
19224	109	19288	109
19225	109	19289	109
19226	109	19290	109
19227	109	19291	109
19228	109	19292	109
19229	109	19293	109
19230	109	19294	109
19231	109	19295	109
19232	109	19296	111
19233	109	19298	111
19236	108	19300	21, 111
19238	108	19302	111
19240	108	19310	111
19241	108	19312	111
19242	108	19320	111
19243	108	19322	111
19250	108	19330	111
19252	108	19332	111
19256	108	19336	111
19257	108	19338	111
19258	108	19340	111
19259	108	19342	111
19260	108	19350	111
19261	108	19352	111
19262	108	19360	111
19263	108	19361	111
19266	108	19362	111
19267	108	.5502	
	. 30		



Part No.	Page No.										
19363	111	19456	222	22090	47	22150	45	22228	12	22291	50
19364	111	19457	112	22093	47	22151	45	22231	12, 40	22292	50
19365	111	19457	222	22096	41	22152	45	22232	12, 40	22294	50
19366	111	19460	112	22097	41	22154	45	22236	11	22300	36, 168
19367	111	19460	222	22098	41	22155	45	22237	11	22311	40
19380	111	19461	112	22099	42	22156	45	22238	11	22312	40
19382	111	19461	222	22100	42	22157	45	22240	11	22315	40
19384	111	19462	112	22101	42	22158	45	22243	10	22320	37
19384	111	19462	222	22102	42	22160	46	22244	10	22322	39
19386	111	19463	112	22103	42	22163	46	22245	10	22326	37
19390	111	19463	222	22104	41	22164	46	22246	12	22327	37
19392	111	19465	112	22105	42	22169	46	22248	12	22328	37
19396	111	19465	222	22106	42	22175	46	22250	45	22329	37
19400	111	19467	112	22107	42	22182	46	22251	45	22333	36
19400	223	19467	222	22108	44	22183	46	22253	45	22336	36
19402	111	22000	47	22109	42	22184	46	22254	45	22337	36
19402	223	22005	47	22110	44	22190	182	22255	45	22340	36
19403	111	22010	47	22111	42	22191	182	22256	45	22343	36
19403	223	22012	47	22112	44	22192	50	22257	45	22350	37
19405	111	22015	47	22113	41	22194	50	22258	45	22365	38
19405	223	22017	47	22114	41, 43	22196	50	22260	65	22366	38
19406	111	22020	47	22115	43	22199	50	22260	11, 65	22367	38
19406	223	22022	47	22116	43	22200	10	22262	65	22369	38
19407	111	22024	47	22117	46	22201	10	22262	11, 65	22370	38
19407	223	22026	47	22118	43	22202	10	22265	65	22371	37
19408	111	22030	47	22119	44	22203	10	22265	11, 65	22372	37
19408	223	22032	47	22120	46	22204	10	22267	65	22373	37
19410	9	22040	47	22124	46	22205	10	22267	11, 65	22374	37, 44
19410	110	22042	47	22127	46	22206	10	22268	65	22374	44, 57
19420	112	22044	47	22128	46	22207	10	22268	11, 65	22375	36
19420	115	22045	47	22129	46	22208	10	22270	65	22376	37
19422	112	22046	47	22130	46	22209	10	22270	11, 65	22378	39
19422	115	22050	47	22132	46	22210	10	22272	65	22379	36
19430	112	22054	47	22133	46	22211	10	22272	11, 65	22380	36
19431	112	22060	47	22134	46	22212	10	22273	65	22381	36
19432	112	22061	47	22135	46	22213	10	22273	11, 65	22382	36
19450	112	22062	47	22136	46	22214	10	22276	11	22383	36
19450	222	22063	47	22137	46	22215	10	22277	11	22384	36
19452	112	22064	47	22138	46	22216	10	22280	50	22387	36
19452	222	22070	47	22139	46	22217	10	22281	50	22388	36
19453	112	22072	47	22140	46	22218	10	22282	50	22389	36
19453	222	22072	47	22141	46	22219	10	22283	50	22390	42
19454	112	22073	47	22144	46	22220	12	22284	50	22390	42
19454	222	22080	47	22144	46	22222	12	22285	50	22391	42
19455	112	22082	47	22145	46	22223	12	22286	50	22392	36
19455	222	22084	45	22146	46	22224	12	22287	50	22393	36
19456	112	22086	47	22147	46	22224	12	22290	50	22394	36
13430	112	22000	4/	22140	40	22220	12	22290	30	22333	30



Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
22396	36	22527	47, 210	22991	20	23102	10, 220	23243	21	25905	6
22400	12	22530	47, 210	22993	20	23105	13	23245	21	25906	6
22401	12	22531	47, 210	22997	20	23106	13	23246	9, 18	25907	6
22402	12	22534	47, 210	22999	20	23107	13	23247	9, 18	25910	6
22405	12	22535	47, 210	23010	38	23110	15	23248	9, 18	25911	6
22406	12	22538	47, 210	23011	38	23113	15	23249	9, 18	25912	6
22407	12	22539	47, 210	23014	38	23115	15, 221	23250	20	25913	6
22410	12	22542	47, 210	23015	39	23116	15, 221	23251	20	25914	6
22411	12	22543	47, 210	23016	39	23117	15, 221	23252	20	25915	6
22412	12	22546	47, 210	23017	39	23120	15	23253	20	25916	6
22415	12	22547	47, 210	23020	14, 20, 38	23122	19	23255	20	25917	6
22416	12	22548	47, 210	23021	14, 20,38	23124	13, 45	23256	20	25920	6
22417	12	22549	47, 210	23022	20	23125	20	23260	17	25921	6
22420	12	22550	47, 210	23023	20	23126	20	23266	9, 18	25922	6
22421	12	22551	47, 210	23025	38	23127	20	23267	9, 18	25923	6
22422	12	22554	47, 210	23026	38	23128	20	23268	9, 18	25924	6
22425	12	22555	47, 210	23027	38	23130	13, 45	23269	9, 18	25925	6
22426	12	22558	47, 210	23028	38	23131	13, 45	23270	9, 18	25926	6
22427	12	22559	47, 210	23030	38	23132	13, 45	23272	9, 18	25927	6
22430	12	22600	41	23031	38	23134	13, 45	23274	9, 18	25940	6
22431	12	22601	41	23032	38	23135	13, 45	23278	40	25941	6
22432	12	22602	41	23033	38	23138	13, 45	23280	9, 18	25942	6
22440	12	22603	41	23034	38	23140	13, 45	23282	9, 18	25943	6
22441	12	22604	41	23035	38	23141	13, 45	23284	9, 18	25944	6,7
22442	12	22608	41	23038	38	23142	13, 45	23288	9, 18	25945	6
22460	12	22610	41	23040	39	23170	19	23291	18	25946	6
22461	12	22620	41	23041	39	23171	19	23292	18	25947	6
22462	12	22621	41	23042	39	23180	19	23293	18	25950	7
22464	12	22622	41	23043	39	23181	19	23297	18	25951	7
22465	12	22623	41	23044	39	23204	19	23300	17	25954	7
22466	12	22628	41	23045	39	23215	19	23301	17	25955	7
22480	10	22630	41	23046	39	23220	169	23302	17	25956	7
22482	10	22640	41	23047	39	23221	169	23304	17	25957	7
22484	10	22642	41	23048	39	23222	169	23306	17	25970	140
22486	10	22645	44	23058	39	23223	169	23308	21	25972	140
22488	10	22650	42	23064	40	23224	66, 164	23309	21	25973	140
22500	47, 210	22652	44	23066	12, 40	23225	66, 164	23310	21	25975	140
22504	47, 210	22653	44	23067	12, 40	23226	164	23312	21	25977	140
22508	47, 210	22654	44	23068	12	23228	91	23314	21	25980	139
22509	47, 210	22670	43	23073	12, 40	23229	91	23316	21	25981	139
22512	47, 210	22974	20	23075	40	23230	9, 18	23318	21	25982	139
22513	47, 210	22979	20	23075	14, 38, 40	23232	9, 18	23319	21	25983	139
22518	47, 210	22981	20	23080	14	23233	9, 18	25900	6	25984	139
22519	47, 210	22983	20	23081	14	23235	9, 18	25901	6	25985	139
22522	47, 210	22985	20	23082	14	23237	9, 18	25902	6	25986	139
22523	47, 210	22986	20	23088	15	23240	21	25903	6	25987	139
22526	47, 210	22990	20	23100	221	23242	21	25904	6	25990	139



Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
25991	139	26064	140	26134	89	26221	7	26952	255	30064	66
25992	139	26065	140	26135	89	26222	7	27500	86	30070	67
25993	139	26066	140	26137	95	26224	7	27502	86	30072	67
25994	139	26067	140	26139	95	26225	7	27503	86	30074	67
25995	139	26068	140	26140	95	26227	96	27504	86	30076	67
25996	139	26069	140	26143	95	26228	96	27505	86	30079	67
25997	139	26072	8, 166, 231	26145	95	26230	7	30001	66	30085	65
26000	8	26073	8, 166, 231	26147	95	26232	96	30002	66, 234	30085	67
26002	8	26074	8, 166, 231	26150	138	26234	99	30003	66, 234	30091	67
26004	8	26075	8, 166, 231	26151	138	26236	81	30005	64	30092	67
26006	8	26076	8, 166, 231	26152	133, 138	26240	89	30006	64	30093	67
26009	8, 58, 61,	26080	7	26153	133, 138	26241	89	30007	64	30094	67
	231	26081	7	26154	132, 138	26310	139	30010	62	30095	67
26010	8	26084	6	26156	132, 138	26311	139	30011	62	30096	67
26020	8	26084	6	26157	132, 138	26313	139	30012	62	30097	67
26021	8	26085	6	26158	132, 138	26314	139	30014	62	30099	67
26022	8	26085	6	26159	132, 138	26315	139	30016	62	30100	67
26023	8	26086	6	26164	132, 138	26316	139	30020	62	30101	67
26028	8	26086	6	26165	132, 138	26320	95	30021	62	30102	67
26029	8	26087	6	26166	132, 138	26322	95	30022	62	30103	67
26030	8	26087	6	26167	132, 138	26324	140	30024	62	30104	67
26032	8, 166,231	26088	6	26168	132, 138	26326	140	30026	62, 71	30105	67
	8, 166, 231	26089	6	26169	132, 138	26700	253	30028	63, 164	30106	66
	8, 166, 231	26090	6	26170	95	26702	253	30030	63, 164	30107	66
	8, 166, 231	26091	6, 7	26171	95	26704	253	30033	62	30108	66
	8, 166, 231	26092	6	26172	95	26706	253	30035	62	30109	66
	8, 139, 231	26093	6	26176	95	26708	253	30036	62	30110	66
	8, 139, 231	26094	6	26177	95	26800	254	30037	62	30111	66
	8, 139, 231	26095	6	26179	140	26801	254	30038	62	30112	66
	8, 139, 231	26096	6	26180	140	26805	254	30039	62	30114	66
	8, 139, 231	26097	6	26181	140	26806	254	30040	62	30115	66
26045	7	26098	6	26182	140	26810	254	30041	62	30116	66
26046	7	26099	6	26183	140	26815	254	30042	62	30120	64
26047	7	26100	8	26184	140	26820	254	30043	62	30121	62
26048	7	26101	8	26185	140	26825	254	30044	63	30122	62, 63
26053	7	26104	9	26186	140	26830	254	30045	62	30123	62
26054	7	26106	7	26187	140	26831	254	30046	62	30124	65
26055	7	26112	254	26188	140	26835	254	30047	62	30125	65
26056	7	26114	254	26189	140	26836	254	30048	62	30126	65
26057	7	26115	230, 254	26190	140	26840	254	30050	63	30128	62, 65
26058	7	26120	89, 254	26200	231	26845	254	30051	63	30129	65
26058	7	26121	254	26210	95	26900	254	30053	63	30130	65
26059	140	26125	89	26211	95	26902	254	30054	63	30131	62, 65
26060	140	26126	89	26212	87, 95	26904	254	30060	66	30132	65
26061	140	26127	89	26216	87	26906	254	30061	66	30133	65
26062	140	26132	89	26217	87	26908	254	30062	66	30134	65
26063	140	26133	89	26220	7	26950	255	30063	66	30135	63, 65



			1		1						
Part No.	Page No.	Part No.	Page No.	Part No.		Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
30136	65	30253	71, 135	31082	69	34231	98	36116	72	36205	95, 96
30137	63, 65	30254	71, 135	31083	69	34232	98	36117	92	36208	96
30139	65	30255	71, 135	31084	69	34233	98	36120	180	38060	102
30142	92	30256	71, 135	31085	69	34238	81, 98	36121	180	38061	102
30143	92	30257	71, 135	31090	69	34241	98	36122	180	38064	102
30144	91, 92	30258	71, 135	31092	69	34242	98	36123	180	38065	102
30145	91	30260	71	31093	69	34243	98	36124	157, 180	38070	255
30146	91	30300	64	31094	69	34244	98	36125	180	38072	53, 255
30152	63	30301	64	31095	69	34245	98	36126	180	38080	102
30153	63	30302	64	31100	68	34246	98	36130	180	38082	102
30158	65, 164	30304	64	31105	68	34247	98	36132	180	38084	102
30160	39, 65	30306	64	31106	68	34250	98	36134	157	38085	100, 101
30163	65, 164	30308	64	31120	70	34251	98	36136	180	38090	103
30165	21, 168	30310	64	31122	68	34252	98	36137	180	38098	102
30166	21, 168	30320	63	31130	70	34253	98	36140	92, 157	38100	102
30170	70	30321	63	31135	70	34254	98	36141	92, 157	38101	102
30171	70	30322	63	31136	70	34255	98	36142	92, 157	38102	102
30172	70	30324	63	31137	70	34256	98	36145	157	38108	102
30173	70	30326	63	31138	70	34257	98	36147	253	38109	102
30174	70	30370	70	31139	70	34262	98, 107	36148	157	38110	102
30178	72, 135	30371	70	31140	70	34264	98, 107	36150	72	38112	102
30179	72, 135	30372	70	31150	70	34266	98	36151	72	38113	102
30180	67	30373	70	31151	70	34272	88	36154	72	38114	103
30182	67	30375	70	31152	70	34273	88	36155	72	38115	103
30184	67	31020	69	31153	70	34274	88	36160	96	38116	103
30186	67	31022	69	31154	70	34275	88	36161	96	38118	164
30188	67	31024	69	31160	71	34280	73, 138	36164	96	38119	164
30190	67	31026	69	31170	68	34282	73, 138	36165	96	38120	100, 101
30192	67	31028	69	34145	95	34284	73, 138	36166	96	38121	100, 101
30200	71, 135	31030	68	34146	95	34285	73, 138	36167	96	38122	100, 101
30202	71, 135	31031	69	34150	98	34286	73, 138	36168	96	38124	100, 101
30204	71, 135	31032	69	34152	98	34290	73, 138	36169	96	38126	165
30206	71, 135	31033	69	34153	98	34292	73, 138	36170	96	38128	164
30208	71, 135	31034	69	34180	98	34294	73, 138	36171	96	38130	164
30210	71, 135	31035	69	34181	98	34295	73, 138	36172	96	38132	100, 101
30212	71, 135	31036	69	34182	98	34296	73, 138	36173	96	38133	100, 101
30214	71, 135	31037	69	34183	98	36092	166	36174	96	38134	100, 101
30220	71, 135	31038	69	34200	98	36092	92, 166	36175	96	38138	100, 101
30222	71, 135	31040	68	34210	98	36093	92, 166	36176	96	38139	100, 101
30224	71, 135	31050	68	34210	99	36103	92, 157	36177	96	38142	100, 101
30228	71, 135	31064	68, 179	34212	99	36105	92, 157	36180	96	38143	100, 101
30240	71	31066	68, 179	34213	99	36107	157	36181	96	38145	164
30241	70	31070	68	34214	99	36108	92	36182	96	38150	101, 165,
30242	70	31071	68	34215	99	36109	92	36183	96		255
30250	71, 135	31072	68	34217	99	36110	157	36202	96, 161	38152	101, 165, 255
30251	71, 135	31073	68	34220	98	36111	157	36203	96, 161	38200	103
30252	71, 135	31080	69	34230	98	36115	72	36204	95, 96	11200	



	Page No.
38250	103
38251	103
40090	139, 232
40100	144, 231
40102	144, 231
40104	144, 231
40107	231
40108	231
40112	157, 177, 251
40114	144, 232
40116	144, 232
40117	144, 232
40118	144, 232
40119	144, 232
40133	144
40134	144
40136	144
40137	144
40160	132, 144
40161	132, 144
40162	132, 144
40168	132, 144
40170	132, 144
40180	132, 138
40185	132, 138
40186	132, 138
40190	137
40191	137
40192	137
40193	137
40200	144
40201	144
40203	144
40208	137
40210	137
40213	144
40215	144
40216	137
40217	137
40218	137
40219	137
40220	137
40222	137
40223	137
40224	137
40225	137

Part No.	Page No.
40226	137
40227	137, 167
40228	137
40229	137, 167
40230	137
40232	137
40235	137, 167
40236	137
40237	137
40238	137
40239	137
40240	137
40242	137
40243	137
40244	137
40245	137
40246	137, 167
40250	136
40251	136
40254	92, 136
40255	92, 136
40260	136
40261	136
40262	136
40262	136
	136
40267	
40290	136
40300	92, 136
40301	92, 136
40302	92, 136
40303	92, 136
40304	92, 136
40305	92, 136
40306	92, 136
40307	136
40307	92, 136
40320	136, 166
40322	136
40325	139, 166
40327	139, 166
40330	166, 231
40340	132, 137
40341	132, 137
40342	132. 137
40343	132, 137
40350	72, 132, 137

Part No.	
40351	72, 132, 137
40353	72, 132, 137
40354	72, 132, 137
40356	72, 132, 137
40357	72, 132, 137
41005	27
41006	27
41007	27
41008	27
41009	27
41012	27, 33, 125
41013	27
41014	27
41015	27
41026	27
41027	27
41028	27
41031	170
41032	170
41033	170
41040	28
41042	28
41043	28
41044	28
41045	28
41046	28
41048	28
41049	28
41050	26
41051	26
41052	26
41053	26
41054	26
41055	26
41060	27
41061	27
41062	27
41064	27
42000	23
42001	23
42004	23
42005	23
42011	22

ge No.		Page No.
2, 132, 137	42014	23
2, 132,	42016	23
137	42019	25
2, 132,	42024	25
137 2, 132,	42025	25, 33, 125, 129
137 2, 132,	42026	23, 25, 33, 125, 129
137	42029	25
27	42030	25
27	42032	25, 33,
27		125, 129 25, 33,
27	42033	125, 129
27	42039	25
33, 125	42040	25
27	42041	25
27	42042	25
27	42043	25
27	42045	27
27	42046	27
27	42052	30, 129
170	42053	30, 129
170	42054	30, 129
170	42056	30, 129
28	42057	30, 129
28	42058	30, 129
28	42060	30, 129
28	42061	
28		30, 129
28	42062	30, 129
28	42070	29
28	42071	29
26	42072	29
26	42073	29
	42074	29
26	42077	29
26	42078	29
26	42079	24
26	42080	24
27	42081	24
27	42082	24
27	42083	24
27	42084	24
23	42086	22, 187
23	42087	22, 187
23	42088	22, 187
23	42089	22
22	42089	22
	72030	~~

Part No.	Page No.
42091	22
42095	22
42100	24
42101	24
42102	24
42103	24
42104	24
42105	24
42108	24
42109	24
42110	23
42111	23
42112	26
42113	26
42114	26
42115	26
42116	26
42117	26
42118	23
42119	23
42120	23
42128	23
42129	23
42130	187
42133	24
42134	24
42135	187
42136	187
42137	24
42140	26
42141	26
42142	26
42143	26
42144	26
42150	26
42151	26
42152	26
42154	26
42155	26
42160	26
42180	23
42181	23
42185	24
42186	24 178,245,
44026	1/8,245, 261

Part NO.	Page No.
44027	178,245, 261
44028	178,245, 261
44030	242, 263
44032	242, 263
44034	242, 263
44036	178, 245, 261
44037	178, 245, 261
44045	257
44046	242, 262
44047	242, 262
44048	242, 262
44053	263
44056	242, 262
44057	242, 262
44058	242, 262
44060	178, 263
44061	178, 263
44062	178, 263
44063	178, 263
44065	263
44066	263
44067	263
44076	242, 262
44077	242, 262
44080	263
44096	258
44097	258
44098	258
44100	258
44101	258
44102	258
44103	258
44104	258
44106	258
44107	258
44108	258
44109	258
44110	258
44111	258 258
44112	258
44113	258
44114	258
44116	258
44110	230

Part No. Page No.



Part No.	Page No.	Part No.	Page No.	Part No.	Page No.						
44117	258	44195	257	44282	256	48030	30, 131	48302	31, 130	48374	127, 167
44119	258	44196	245, 259	44283	256	48032	30, 131	48303	31, 130	48375	127, 167
44120	259	44197	245, 259	44285	256	48033	30, 131	48304	31, 130	48376	127, 167
44121	259	44198	245, 259	44286	256	48034	30, 131	48305	31, 130	48378	127, 167
44122	259	44200	259	44287	256	48035	30, 131	48306	31, 130	48379	127, 167
44123	259	44210	259	44288	256	48036	30, 131	48307	31, 130	48380	127, 167
44124	259	44211	259	44289	256	48037	28	48308	31, 130	48381	127, 167
44125	259	44212	259	44290	256	48040	31, 131	48310	31, 130	48382	127, 167
44126	259	44214	259	46100	129	48048	31, 131	48311	31, 130	48383	127, 167
44127	259	44215	259	46101	129	48050	31, 131	48312	31, 130	48384	127, 167
44128	258	44216	259	46110	129	48052	31, 131	48313	31, 130	48385	127, 167
44129	259	44217	259	46300	126	48054	31, 131	48314	31, 130	48386	127, 167
44130	146	44218	259	46301	126	48056	31, 131	48315	31, 130	48387	127, 167
44131	146	44219	259	46302	126	48058	31, 131	48316	31, 130	48388	127, 167
44134	263	44220	247, 260	46304	126	48060	31, 131	48317	31, 130	48389	127, 167
44135	263	44222	247, 260	46310	128	48062	31, 130	48318	31, 130	48390	127, 167
44136	263	44223	247, 260	46312	128	48200	133, 180	48320	130, 137	48392	127
44137	263	44224	247, 260	46332	128	48201	133, 180	48322	130, 137	48393	127
44138	263	44225	256	46340	128	48204	133, 180	48326	31,130	48394	127
44139	263	44226	256	46341	128	48205	133, 180	48327	130, 137	48398	127, 167
44150	257	44228	256	46400	126	48210	134, 181	48328	130, 137	48399	127, 167
44151	257	44229	256	46401	126	48211	134, 181	48330	31	48400	127, 167
44152	257	44230	256	46402	126	48212	134, 181	48332	31	48401	127, 167
44153	257	44231	256	46404	126	48214	134, 181	48349	127, 167	48402	127, 167
44154	257	44232	256	46420	128	48215	134, 181	48350	127, 167	48403	127, 167
44155	257	44233	256	46440	128	48217	134, 181	48351	127, 167	48404	127, 167
44165	234	44235	256	48000	169	48240	179	48352	127, 167	48405	127, 167
44168	177, 257	44236	256	48002	169	48242	179	48353	127, 167	48407	127, 167
44175	257	44237	256	48004	169	48245	179	48354	127, 167	48408	127, 167
44176	257	44238	256	48006	133	48250	179	48355	127, 167	48409	127, 167
44178	257	44239	256	48006	169	48252	179	48356	127, 167	48410	127, 167
44179	256, 257	44240	256	48010	29	48260	134, 172,	48358	127, 167	48413	127, 167
44180	245, 259	44242	177	48011	29		181	48359	127, 167	48414	127, 167
44181	245, 259	44243	256	48012	29	48261	134, 172, 181	48360	127, 167	48415	127, 167
44182	245, 259	44245	256	48013	29	49262	134, 172,	48361	127, 167	48416	127, 167
44183	245, 259	44246	256	48014	29	48262	181	48362	127, 167	48417	127, 167
44184	245, 259	44247	256	48017	29	48270	133, 180	48363	127, 167	48418	127, 167
44185	245, 259	44249	256	48018	30, 131	48271	133, 180	48364	127, 167	48419	127, 167
44186	245, 259	44250	256	48019	30, 131	48272	133, 180	48365	127, 167	48420	127, 167
44187	245, 259	44251	256	48020	30, 131	48273	133, 180	48366	127, 167	48422	127, 167
44188	245, 259	44253	256	48021	30, 131	48275	133, 180	48367	127, 167	48423	127, 167
44189	245, 259	44265	177, 256	48022	30, 131	48276	133	48368	127, 167	48424	127, 167
44190	257	44266	177, 256	48023	30, 131	48277	133, 180	48369	127, 167	48425	127, 167
44191	257	44270	257	48025	28	48278	133, 180	48370	127, 167	48426	127, 167
44192	257	44271	257	48026	30, 131	48279	133, 180	48371	127, 167	48427	127, 167
44193	257	44280	256	48027	30, 131	48300	31, 130	48372	127, 167	48430	127
44194	257	44281	256	48028	30, 131	48301	31, 130	48373	127, 167	48434	127



Dord No.	Daniel Mar	Do d No.	D N.	Do d No	D No.	Do at No	D N.	Do d No	D No.	D. A.N.	December 1
	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
48440	127	49571	122	49641	123	49733	122	49812	123	50061	32, 124
48444	127	49571	122	49642	123	49734	122	49813	123	50062	32, 124
48465	127	49572	122	49643	123	49735	122	49814	123	50063	32, 124
48466	127	49573	122	49644	123	49736	122	49820	123	50066	32, 124
48500	179	49574	122	49645	123	49737	122	49821	123	50067	32, 124
48501	179	49577	122	49646	123	49738	122	49822	123	50068	32, 124
48502	179	49578	122	49650	123	49739	122	49830	123	50070	32, 124
48503	179	49579	122	49651	123	49740	122	49831	123	50072	32, 124
49502	122	49580	122	49652	123	49741	122	49832	123	50076	32, 96, 124
49505	122	49581	122	49653	123	49742	122	49833	123	50077	32, 124
49506	122	49584	122	49670	123	49743	122	49834	123	50080	32, 124
49507	122	49585	122	49671	123	49744	122	49836	123	50082	32, 124
49508	122	49587	122	49672	123	49745	122	49837	123	50090	34, 128
49509	122	49588	122	49673	123	49746	122	49838	123	50091	34, 128
49510	122	49589	122	49674	123	49747	122	49839	123	50092	34, 128
49511	122	49590	122	49675	123	49748	122	49841	123	50093	34, 128
49512	122	49591	122	49676	123	49749	122	49842	123	50094	34, 128
49513	122	49592	122	49680	123	49750	122	49843	123	50095	34, 128
49514	122	49596	122	49681	123	49751	122	49844	123	50096	34, 128
49517	122	49599	122	49682	123	49752	122	49845	123	50097	34, 128
49518	122	49600	122	49683	123	49753	122	49847	123	50098	34, 128
49519	122	49601	122	49684	123	49754	122	49848	123	50099	34, 128
49520	122	49602	122	49685	123	49755	122	49849	123	50100	33,125
49521	122	49603	122	49686	123	49756	122	49850	123	50101	33,125
49532	122	49604	122	49700	122	49760	123	49852	123	50102	33,125
49535	122	49605	122	49701	122	49761	123	49853	123	50103	33,125
49536	122	49606	122	49702	122	49763	123	49854	123	50104	33,125
49537	122	49610	122	49703	122	49765	123	49855	123	50105	33,125
49538	122	49611	122	49704	122	49770	123	49857	123	50108	34, 128
49539	122	49612	122	49705	122	49771	123	49858	123	50109	34, 128
49540	122	49613	122	49706	122	49772	123	50000	32, 124	50110	31, 130
49541	122	49614	122	49710	122	49773	123	50001	32, 124	50111	31, 130
49542	122	49615	122	49711	122	49774	123	50004	32, 90, 124	50113	31, 130
49543	122	49616	122	49712	122	49775	123	50010	32, 90, 124	50114	31, 130
49544	122	49620	122	49713	122	49776	123	50011	32, 124	50115	31, 130
49547	122	49621	122	49714	122	49777	123	50018	32, 124	50116	31, 130
49548	122	49622	122	49715	122	49778	123	50019	32, 124	50117	31, 130
49549	122	49623	122	49716	122	49780	123	50020	32, 124	50118	31, 130
49550	122	49624	122	49720	122	49781	123	50021	32, 90, 124	50119	31, 130
49551	122	49625	122	49721	122	49785	123	50029	32, 124	50120	33, 125
49562	122	49626	122	49722	122	49800	123	50030	32, 124	50121	33, 125
49565	122	49630	122	49723	122	49801	123	50032	32, 124	50125	33, 125
49566	122	49631	122	49724	122	49802	123	50035	32, 124	50127	33, 125
49567	122	49632	122	49725	122	49803	123	50036	32, 124	50129	33, 125
49568	122	49633	122	49730	122	49804	123	50037	32, 124	50130	33, 125
49569	122	49634	122	49731	122	49805	123	50040	30, 32, 124	50131	33, 125
49570	122	49640	123	49732	122	49811	123	50060	32, 124	50132	33, 125



Part No.	Page No.	Part No.	Page No.
50133	33, 125	50732	134, 157
50135	33, 125	50733	134, 157
50136	33, 125	50734	134, 157
50137	33, 125	50735	134, 157
50138	32, 124	50740	96, 135
50139	32, 124	50741	96, 135
50140	130, 138	50742	96, 135
50141	130, 138	50743	96, 135
50142	130, 138	50744	96, 135
50143	130, 138	50745	96, 135
50150	33, 125	50750	96, 135
50180	33, 125	50751	96, 135
50182	32, 124	50752	96, 135
50183	33, 125	50753	96, 135
50184	30, 32, 124	50754	96, 135
50185	32, 124	50760	96, 135
50199	32, 124	50761	96, 135
50200	32, 124	50762	96, 135
50201	123	50763	96, 135
50202	123	50765	96, 135
50203	72, 134	50766	96, 135
50204	72, 134	50770	96, 135
30204	34, 127,	50771	96, 135
50209	167	50772	96, 135
50212	34, 127,	50773	96, 135
30212	167	50774	96, 135
50213	34, 127, 167	50775	96, 135
	34, 127,	50780	96, 135
50215	167	50781	96, 135
50250	24	50781	96, 135
50251	24		
50300	34, 130	50783	96, 135
50310	130	50784	96, 135
50310	34, 130	50785	96, 135
	34, 123,	50800	132, 230
50320	130	50801	132, 230
50321	34, 123,	50802	132, 230
	130	50803	132, 230
50322	123, 130	50804	132, 230
50323	123, 130	50805	132, 230
50324	123, 130	50806	132, 230
50330	34, 123, 130	50807	230 132, 230
E0224	34, 123,	50810	132, 230
50331	130		
50332	123, 130	50811	132, 230
50333	123, 130	50812	132, 230
50334	123, 130	50813	132, 230
		50814	132, 230

	PERF
Part No.	Page No.
50815	132, 230
50816	132, 230
50817	132, 230
50818	132, 230
50820	132, 230
50821	230
50822	132, 230
50823	132, 230
50824	132, 230
50825	132, 230
50826	132, 230
50827	132, 230
50830	132, 230
50831	132, 230
50832	132, 230
50833	132, 230
50834	132, 230
50835	132, 230
50836	132, 230
50837	132, 230
50855	33,125
50890	133, 138
50892	133, 138
50894	133, 138
50896	133, 138
50900	133, 138
50901	133, 138
50902	133, 138
50904	133, 138
50905	133, 138
50906	133, 138
50907	133, 138
50910	133, 138
50915	136
50916	136
50950	133, 138
50951	133, 138
52100	180
52102	180
52112	172
52113	172
52114	172
52115	172
52116	172
52120	43, 182
52122	43, 182
F2124	42 102

Part No.	Page No.
52126	43, 182
52128	182
52130	182
52132	43, 182
52133	43, 182
52140	182
52142	182
52144	182
52145	182
52146	182
52148	182
52170	182
52171	182
52172	182
52175	182
52176	182
52177	182
52178	182
52179	182
52300	181
52301	181
52302	181
52303	181
52304	181
52305	181
52306	181
52307	181
52310	181
52312	181
52314	181
52316	181
52320	159, 181
52322	159, 181
52325	181
52345	185
52350	185
52351	185
52352	185
54050	26, 43
54060	26, 43
54070	11, 43
54071	11, 43
54072	11, 43
54090	143, 170
54091	143, 170
54092	143, 170
54094	143, 170

Part No.	Page No.
54095	143, 170
54098	143
54099	143
54100	143
54101	143
54102	143
54104	143
54105	143
54106	143, 170
54107	143
54108	252
54110	252
54112	252
54113	252
54114	252
54115	62, 252
54116	62, 252
54117	252
54117	62, 252
54118	252
54119	252
54120	252
54121	252
54122	252
54125	252
54128	252
54130	163, 253
54135	253
54135	163, 253
54142	142, 253
54145	142, 253
	142, 170,
54147	252
54149	142, 170,
	252
54150	142, 170
54152	142, 170
54154	141
54158	142
54159	142, 143
54163	142
54164	142
54166	142
54167	142
54168	142
54168	142
54170	142

Part No.	Page No.
54171	142
54172	142
54173	142
54174	142
54175	142
54180	143
54181	143
54182	143
54185	140
54186	140
54193	141
54194	141
54195	141
54196	141
54197	141
54198	141
54199	141
54200	141
54201	141
54202	141
54203	141
54210	141
54211	141
54214	141
54215	141
54218	141
54219	141
54222	141
54223	141
54224	141
54225	141
54226	141
54227	141
54230	141
54231	141
54234	141
54235	141
54238	141
54239	141
54240	141
54241	141
54260	141
54261	141
54264	141
54265	141
54268	141
54269	141

Part No. Page No.

43, 182

52124



Part No.	Page No.	Part No.	Page No.
54272	141	55036	172
54273	141	55037	172
54276	141	55040	174
54277	141	55042	174
54278	141	55044	174
54279	141	55046	174
54280	141	55050	174
54280	141	55051	174
54282	141	55052	174
54284	141	55054	174
54286	141	55055	174
54288	141	55056	174
54290	141	55058	171
54292	141	55059	171
54302	9, 18,141	55060	171
54304	9, 18,141	55062	171
54306	9, 18,141	55070	170
54308	9, 18,141	55071	170
55000	172	55072	170
55001	172	55073	170
55002	172	55077	175
55003	172	55078	175
55004	172	55080	175
55005	172	55081	175
55006	172	55082	175
55007	172	55084	175
55010	172	55085	175
55011	172	55086	175
55012	172	55087	175
55013	172	55090	175
55014	172	55091	175
55015	172	55092	175
55016	172	55093	175
55017	172	55094	175
55020	173	55095	175
55022	173	55096	175
55024	173	55100	168
55025	173	55101	168
55026	173	55102	168
55027	173	55103	168
55028	173	55105	168
55030	171	55106	168
55031	171	55108	168
55032	171	55110	168
55033	171	55111	168
55034	172	55112	167
55035	172	55115	168
	-		

	Page No.
55116	168
55125	168
55126	168
55130	169
55131	169
55132	169
55133	169
55140	173
55150	173
55160	173
55170	171
55171	171
55220	156, 163, 165,255
55224	156, 255
55226	156, 255
55230	158, 171
55232	171
55900	184
55901	184
55902	184
55903	184
55904	184
55908	184
55910	184
55911	184
55912	184
55920	184
55921	184
55922	184
55930	184
55931	184
55932	171
55933	171
55960	186
55961	186
55963	186
55964	186
55965	186
55966	186
55967	186
55970	186
55971	186
55972	186
55973	186
55974	186
55976	187

55977 187 55978 187 55979 187 55980 187 55981 186, 187 55982 186, 187 55983 186, 187 55989 187 55990 186 55991 186 55992 186 55993 186 55994 186 55995 186 55996 186 55997 186 55998 186 55999 186 55999 186 55999 186 55999 186 55999 186 56009 190 56010 190 56011 190 56012 190 56013 190 56020 190 56021 190 56022 190 56031 190 56032 190	Part No.	Page No.
55979 187 55980 187 55981 186, 187 55982 186, 187 55983 186, 187 55989 187 55990 186 55991 186 55992 186 55993 186 55994 186 55995 186 55996 186 55998 186 55999 186 55999 186 55999 186 55999 186 55999 186 55999 186 56001 190 56012 190 56013 190 56014 190 56015 190 56020 190 56021 190 56022 190 56023 190 56030 190 56031 190 56034 190		
55980 187 55981 186, 187 55982 186, 187 55983 186, 187 55989 187 55990 186 55991 186 55992 186 55993 186 55994 186 55995 186 55996 186 55997 186 55998 186 55999 186 56008 190 56010 190 56011 190 56012 190 56014 190 56015 190 56018 190 56019 190 56020 190 56027 190 56028 190 56030 190 56031 190 56032 190 56034 190 56042 190 56044 190	55978	187
55981 186, 187 55982 186, 187 55983 187 55989 187 55990 186 55991 186 55992 186 55993 186 55994 186 55995 186 55996 186 55997 186 55998 186 55999 186 55999 186 56008 190 56010 190 56011 190 56012 190 56013 190 56014 190 56015 190 56018 190 56020 190 56021 190 56022 190 56023 190 56030 190 56031 190 56034 190 56042 190 56044 190 <	55979	187
55982 186, 187 55983 186, 187 55989 187 55990 186 55991 186 55992 186 55993 186 55994 186 55995 186 55996 186 55997 186 55998 186 55999 186 56008 190 56010 190 56011 190 56012 190 56014 190 56015 190 56018 190 56019 190 56020 190 56021 190 56029 190 56021 190 56022 190 56031 190 56034 190 56035 190 56042 190 56044 190 56046 190 <	55980	187
55983 186, 187 55988 187 55990 186 55991 186 55992 186 55993 186 55994 186 55995 186 55996 186 55997 186 55998 186 55999 186 56008 190 56010 190 56011 190 56012 190 56014 190 56015 190 56018 190 56019 190 56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56042 190 56044 190 56046 190 56047 190 56048 190 56	55981	186, 187
55988 187 55989 187 55990 186 55991 186 55992 186 55993 186 55994 186 55995 186 55996 186 55998 186 55999 186 55999 186 56008 190 56010 190 56011 190 56012 190 56013 190 56014 190 56015 190 56018 190 56020 190 56021 190 56022 190 56023 190 56024 190 56031 190 56034 190 56042 190 56044 190 56047 190 56048 190 56049 190 56050 </td <td>55982</td> <td>186, 187</td>	55982	186, 187
55989 187 55990 186 55991 186 55992 186 55993 186 55994 186 55995 186 55996 186 55997 186 55998 186 55999 186 56008 190 56010 190 56011 190 56012 190 56014 190 56015 190 56018 190 56019 190 56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56042 190 56044 190 56046 190 56047 190 56048 190 56050 190 56051 </td <td>55983</td> <td>186, 187</td>	55983	186, 187
55990 186 55991 186 55991 186 55992 186 55993 186 55994 186 55995 186 55996 186 55997 186 55998 186 55999 186 56008 190 56010 190 56011 190 56012 190 56014 190 56015 190 56018 190 56019 190 56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56042 190 56044 190 56046 190 56047 190 56048 190 56050 190 56051 </td <td>55988</td> <td>187</td>	55988	187
55991 186 55992 186 55993 186 55994 186 55995 186 55996 186 55997 186 55998 186 55999 186 56008 190 56010 190 56011 190 56012 190 56013 190 56014 190 56015 190 56018 190 56020 190 56021 190 56022 190 56023 190 56024 190 56030 190 56031 190 56034 190 56042 190 56044 190 56046 190 56047 190 56048 190 56050 190 56051 190 56052 </td <td>55989</td> <td>187</td>	55989	187
55992 186 55993 186 55994 186 55995 186 55996 186 55997 186 55998 186 55999 186 56008 190 56010 190 56011 190 56012 190 56014 190 56015 190 56018 190 56019 190 56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56035 190 56042 190 56043 190 56046 190 56047 190 56048 190 56050 190 56051 190 56052 217 56053 </td <td>55990</td> <td>186</td>	55990	186
55993 186 55994 186 55995 186 55996 186 55997 186 55998 186 55999 186 56008 190 56010 190 56011 190 56012 190 56014 190 56015 190 56018 190 56019 190 56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56042 190 56044 190 56046 190 56047 190 56050 190 56051 190 56053 217 56053 217	55991	186
55994 186 55995 186 55996 186 55997 186 55998 186 55999 186 56008 190 56009 190 56010 190 56011 190 56012 190 56014 190 56015 190 56018 190 56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56035 190 56042 190 56044 190 56046 190 56047 190 56050 190 56051 190 56053 217 56053 217 56053 217 56053 217	55992	186
55995 186 55996 186 55997 186 55998 186 55999 186 56008 190 56009 190 56010 190 56011 190 56012 190 56014 190 56015 190 56018 190 56019 190 56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56035 190 56042 190 56044 190 56046 190 56048 190 56050 190 56051 190 56053 217 56053 217 56053 217 56053 217	55993	186
55996 186 55997 186 55998 186 55999 186 56008 190 56009 190 56010 190 56011 190 56012 190 56014 190 56015 190 56018 190 56019 190 56020 190 56027 190 56028 190 56030 190 56031 190 56034 190 56035 190 56042 190 56044 190 56046 190 56047 190 56048 190 56050 190 56051 190 56053 217 56053 217	55994	186
55997 186 55998 186 55999 186 56008 190 56009 190 56010 190 56011 190 56012 190 56014 190 56015 190 56018 190 56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56035 190 56042 190 56044 190 56046 190 56047 190 56048 190 56050 190 56051 190 56053 217 56053 217	55995	186
55998 186 55999 186 56008 190 56009 190 56010 190 56011 190 56012 190 56014 190 56015 190 56018 190 56019 190 56020 190 56028 190 56029 190 56030 190 56031 190 56034 190 56035 190 56042 190 56044 190 56046 190 56048 190 56049 190 56050 190 56051 190 56053 217 56053 217	55996	186
55999 186 56008 190 56009 190 56010 190 56011 190 56012 190 56014 190 56015 190 56018 190 56019 190 56020 190 56028 190 56029 190 56030 190 56031 190 56034 190 56042 190 56044 190 56046 190 56047 190 56048 190 56050 190 56051 190 56052 217 56053 217	55997	186
56008 190 56009 190 56010 190 56011 190 56012 190 56014 190 56015 190 56018 190 56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56035 190 56042 190 56044 190 56046 190 56047 190 56048 190 56050 190 56051 190 56052 217 56053 217	55998	186
56009 190 56010 190 56011 190 56012 190 56014 190 56015 190 56018 190 56019 190 56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56035 190 56042 190 56044 190 56046 190 56048 190 56049 190 56050 190 56051 190 56053 217 56053 217	55999	186
56010 190 56011 190 56012 190 56014 190 56015 190 56018 190 56019 190 56020 190 56028 190 56029 190 56030 190 56031 190 56034 190 56042 190 56044 190 56046 190 56047 190 56048 190 56050 190 56051 190 56052 217 56053 217	56008	190
56011 190 56012 190 56014 190 56015 190 56018 190 56019 190 56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56042 190 56044 190 56046 190 56047 190 56048 190 56050 190 56051 190 56052 217 56053 217	56009	190
56012 190 56014 190 56015 190 56018 190 56019 190 56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56042 190 56044 190 56046 190 56047 190 56048 190 56050 190 56051 190 56052 217 56053 217	56010	190
56014 190 56015 190 56018 190 56019 190 56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56042 190 56044 190 56046 190 56047 190 56049 190 56050 190 56051 190 56052 217 56053 217	56011	190
56015 190 56018 190 56019 190 56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56042 190 56044 190 56046 190 56047 190 56048 190 56050 190 56051 190 56052 217 56053 217	56012	190
56018 190 56019 190 56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56035 190 56042 190 56044 190 56046 190 56047 190 56048 190 56050 190 56051 190 56052 217 56053 217	56014	190
56019 190 56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56035 190 56042 190 56044 190 56046 190 56047 190 56048 190 56049 190 56050 190 56051 190 56052 217 56053 217	56015	190
56020 190 56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56042 190 56044 190 56046 190 56047 190 56048 190 56049 190 56050 190 56051 190 56052 217 56053 217	56018	190
56027 190 56028 190 56029 190 56030 190 56031 190 56034 190 56035 190 56042 190 56044 190 56046 190 56047 190 56048 190 56049 190 56050 190 56051 190 56052 217 56053 217	56019	190
56028 190 56029 190 56030 190 56031 190 56034 190 56035 190 56042 190 56044 190 56046 190 56047 190 56048 190 56049 190 56050 190 56051 190 56052 217 56053 217	56020	190
56029 190 56030 190 56031 190 56034 190 56035 190 56042 190 56044 190 56046 190 56047 190 56048 190 56049 190 56050 190 56051 190 56052 217 56053 217	56027	190
56030 190 56031 190 56034 190 56035 190 56042 190 56044 190 56046 190 56047 190 56048 190 56049 190 56050 190 56051 190 56052 217 56053 217	56028	190
56031 190 56034 190 56035 190 56042 190 56044 190 56046 190 56047 190 56048 190 56049 190 56050 190 56051 190 56052 217 56053 217	56029	190
56034 190 56035 190 56042 190 56044 190 56046 190 56047 190 56048 190 56049 190 56050 190 56051 190 56052 217 56053 217	56030	190
56035 190 56042 190 56044 190 56046 190 56047 190 56048 190 56049 190 56050 190 56051 190 56052 217 56053 217	56031	190
56042 190 56044 190 56046 190 56047 190 56048 190 56049 190 56050 190 56051 190 56052 217 56053 217	56034	190
56044 190 56046 190 56047 190 56048 190 56049 190 56050 190 56051 190 56052 217 56053 217	56035	190
56046 190 56047 190 56048 190 56049 190 56050 190 56051 190 56052 217 56053 217	56042	190
56047 190 56048 190 56049 190 56050 190 56051 190 56052 217 56053 217	56044	190
56048 190 56049 190 56050 190 56051 190 56052 217 56053 217	56046	190
56049 190 56050 190 56051 190 56052 217 56053 217	56047	190
56050 190 56051 190 56052 217 56053 217	56048	190
56051 190 56052 217 56053 217	56049	190
56052 217 56053 217	56050	190
56053 217	56051	190
	56052	217
56060 219	56053	217
	56060	219

Part No.	Page No.			
56061	219			
56062	219			
56063	219			
56064	219			
56065	219			
56066	52, 195			
56067	52, 195			
56068	52, 195			
56070	197			
56071	197			
56073	52, 195			
56074	196, 215			
56075	196, 215			
56077	196			
56078	196			
56079	196			
56080	196			
56085	196			
56086	196			
56087	196			
56088	196			
56089	196			
56090	52, 195			
56091	52, 195			
56092	52, 195			
56093	52, 195			
56094	52, 195			
56095	52, 195			
56097	196			
56098	52, 195			
56099	-			
56100	52, 195 197			
56103	197			
56106				
	52, 195 52, 195			
56107 56109				
	52, 195			
56110	52, 195			
56111	52, 195			
56112	52, 195			
56113	196			
56114	196			
56115	196			
56116	52, 196			
56117	196, 219			
56118	52, 196			
56119	52, 196			
56120	196			

	Part No	Page No.
	56121	196
+	56123	
		53, 219
-	56124	53, 219
	56125	196
	56126	53, 219
	56127	219
	56130	219
_	56131	219
	56132	219
	56133	219
	56134	219
	56136	219
	56138	219
	56141	205
	56142	205
	56143	205
	56146	205
	56147	205
	56148	205
	56152	206
	56153	205
	56154	205
	56155	205
	56156	205
	56161	208
1	56162	208
	56164	208
	56165	208
	56166	208
	56167	208
	56186	195
1	56187	195
	56192	192
	56194	192
	56196	195
1	56197	195
	56198	192, 195
-	56199	192, 195
	56204	
+	56206	185, 188 185, 188
	56208	185, 188
	56210	185, 188
	56212	185, 188
	56214	185, 188, 192
	56216	188
	56216	185, 188



Part No	. Page No.	Part No.	Page No.	Part No.	Page No.						
56217	188	56280	185	56364	209	56422	211	56704	211	56827	191
56217	185, 188	56284	185	56365	209	56472	211	56705	211	56830	191
56218	188	56286	185	56366	209	56505	211	56706	211	56831	191
56218	185, 188	56288	185	56367	209	56506	211	56707	211	56832	191
56220	188	56294	192	56368	209	56507	211	56708	211	56840	191
56220	185, 188	56295	192	56369	208	56508	211	56709	211	56841	191
56221	194	56296	192	56370	208	56509	211	56710	211	56842	191
56222	194	56297	192	56372	208	56510	211	56711	211	56845	191
56223	194	56298	192	56373	208	56511	211	56712	211	56846	191
56224	194	56303	186	56374	208	56512	211	56713	211	56850	191
56225	189	56304	186	56375	208	56513	211	56714	211	56851	191
56227	193	56305	186	56376	208	56514	211	56715	211	56852	191
56228	193	56307	186	56378	208	56515	211	56716	211	56871	191
56229	193	56308	186	56379	208	56516	211	56717	211	56872	191
56230	193	56309	186	56380	197	56517	211	56718	211	56875	191
56232	193	56310	183	56381	197	56518	211	56719	211	56876	191
56233	193	56311	183	56382	197	56519	211	56720	211	56878	191
56234	193	56312	183	56383	197	56520	211	56721	211	56879	191
56235	193	56313	183	56384	197	56521	211	56722	211	56880	191
56236	193	56314	183	56385	197	56522	211	56723	211	56881	191
56238	193	56318	187	56386	197	56523	211	56724	211	56882	191
56240	193	56319	187	56387	197	56524	211	56725	211	56885	191
56242	193	56320	195	56388	197	56525	211	56726	211	56886	191
56244	193	56321	195	56389	197	56526	211	56727	211	56890	191
56245	218	56323	195	56390	208	56527	211	56728	211	56892	191
56247	218	56324	195	56391	208	56528	211	56729	211	57008	184, 210
56248	218	56326	194	56392	208	56529	211	56730	211	57010	184, 210
56250	189	56328	195	56393	208	56530	211	56732	211	57012	184, 210
56251	189	56330	183	56394	208	56572	211	56734	211	57013	184, 210
56252	189	56331	183	56395	208	56607	211	56736	211	57014	184, 210
56253	189	56334	183	56405	211	56608	211	56738	211	57015	184, 210
56256	189, 194	56335	183	56406	211	56609	211	56740	211	57016	184, 210
56260	189	56336	183	56407	211	56610	211	56742	211	57017	184, 210
56261	189	56337	183	56408	211	56611	211	56744	211	57018	184, 210
56262	189	56338	183	56409	211	56612	211	56772	211	57019	184, 210
56264	189	56341	183	56410	211	56613	211	56810	191	57020	184, 210
56265	189	56344	183	56411	211	56614	211	56811	191	57021	184, 210
56266	189	56345	183	56412	211	56615	211	56812	191	57022	184, 210
56267	189	56347	183	56413	211	56616	211	56815	191	57024	184, 210
56270	189	56354	183	56414	211	56617	211	56806	174, 174,	57026	184, 210
56271	189	56355	183	56415	211	56618	211		211	57028	184, 210
56272	189	56356	183	56416	211	56619	211	56807	174, 211	57040	184, 210
56273	189	56357	183	56417	211	56620	211	56820	191	57052	210
56274	189	56358	183	56418	211	56621	211	56821	191	57054	210
56275	189	56360	198	56419	211	56622	211	56822	191	57056	210
56276	189	56361	198	56420	211	56672	211	56825	191	57058	210
56278	185	56362	209	56421	211	56703	211	56826	191	57060	210



57062 210 57188 17	ge No. 74, 210 74, 210 210
57064 96, 210 57190 17 57066 210 57192 57068 210 57254 57070 210 57256	74, 210 210
57066 210 57192 57068 210 57254 57070 210 57256	210
57068 210 57254 57070 210 57256	
57070 210 57256	210
57072 210 57258	210
3,312 210 37230	210
57074 210 57260	210
57076 210 57262	210
57078 210 57264	210
57080 210 57266	210
57082 210 57268	210
57084 210 57270	210
57086 210 57272	210
57088 210 57274	210
57090 210 57276	210
57092 210 57278	210
57094 210 57280	210
57096 210 57282	210
57098 210 57284	210
57099 210 57286	210
57152 210 57288	210
57153 210 57290	210
57154 210 57292	210
57155 210 57294	210
57156 210 57302	184
57157 210 57304	184
57158 210 57306	184
57159 210 57308	184
57160 184, 210 57334	183
57162 184, 210 57335	183
57164 184, 210 57336	183
57166 184, 210 57337	183
57167 184, 210 57338	183
57168 184, 210 57344	210
57169 184, 210 57346	210
57170 184, 210 57348	210
57171 184, 210 57350	210
57172 184, 210 57352	210
57173 184, 210 57354	210
57174 184, 210 57356	210
57175 184, 210 57358	210
57176 184, 210 57359	210
57178 184, 210 57360	210
57180 184, 210 57361	210
57182 184, 210 57362	210
57184 184, 210 57363	210
57186 210 57364	210

Part No.	Page No.	Part No.	Page No.
57365	210	57826	55, 218
57366	210	57830	192
57367	210	57831	192
57368	210	57832	192
57370	210	57833	192
57372	210	57902	192
57374	210	57903	192
57376	210	57904	192
57378	210	57905	192
57380	210	57906	192
57382	210	57907	192
57384	210	57908	192
57444	210	57909	192
57446	210	57910	192
57448	210	57911	192
57450	210	57912	192
57452	210	57913	192
57454	210	57914	192
57456	210	57916	192
57458	210	57922	192
57460	210	57924	192
57462	210	57926	192
57464	210	57928	192
57466	210	57930	192
57468	210	57932	192
57470	210	57934	192
57472	210	57936	192
57474	210	57940	192
57476	210	57941	192
57478	210	57942	192
57480	210	57943	192
57482	210	57944	192
57484	210 194	57945	192
57800 57801	194	57946	192 192
57802	194	57948	192
57803	194	57949	192
57804	194	57950	192
57805	194	57951	192
57810	194	57952	192
57811	194	57953	192
57812	194	57954	192
57813	194	57956	192
57814	194	57962	192
57820	55, 218	57964	192
57822	55, 218	57966	192
57824	55, 218	57968	192
	, -10	2.500	

Part No.	Page No.		
57970	192		
57974	192		
57976	192		
57980	192		
57982	192		
57984	192		
57984	192		
57986	192		
57990	192		
57992	192		
57994	192		
57995	192		
57996	192		
58001	212		
58002	189, 212		
58004	119, 212		
58005	119, 212		
	119, 212,		
58006	252		
58008	119, 212		
58010	119, 212		
58012	119, 212		
58013	119, 212		
58014	119, 212		
58015	119, 212		
58016	119, 212, 252		
58018	119, 212		
58020	119, 212		
58022	119, 212		
58034	119, 212		
58035	119, 212		
58036	119, 212		
58038	119, 212		
58040	119, 212		
58042	119, 212		
58058	119, 212		
58059	119, 212		
58060	119, 174, 212		
58062	119, 212		
58068	119, 212		
58069	119, 212		
58070	119, 174,212		
58072	119, 212		
58078	119, 212		
58079	119, 212		

Part No.	Page No.
58080	119, 212
58082	119, 212
58083	119, 212
58084	119, 212
58085	119, 212
58086	119, 212
58088	119, 212
58089	119, 174, 212
58098	119, 212
58099	119, 174, 212
58112	119, 212
60000	49
60001	49
60002	49
60003	49
60004	49
60005	16, 49
60006	16, 49
60007	49
60008	49
60009	49
60010	49
60011	49
60012	49
60013	49
60014	15, 49
60015	15, 49
60016	15, 49
60017	15, 49
60018	49
60019	49
60020	49
60021	49
60022	49
60023	50
60024	15
60024	49
60025	52
60025	193
60026	55
60027	15, 49
60028	43, 182
60029	33, 49, 125
60030	33, 49, 125
60031	44



Part No. Page No. 60032 44 60033 44 60034 53, 219 60035 53, 219 60036 219 60037 219 60038 219 60039 98 60040 98 60041 15, 49 60042 54, 217 60043 54, 217 60044 54, 217 60045 54, 217 60046 54, 217 60045 54, 217 60046 54, 217 60045 54, 217 60046 54, 217 60050 55, 218 60051 55, 218 60052 55, 218 60053 55, 218 60054 55, 218 60055 219 60056 219 60057 144 60058 55, 218 60060 57, 144 60061 57, 144						
60033 44 60086 15, 49 60034 53, 219 60087 15, 49 60035 53, 219 60089 54, 204 60037 219 60090 49 60038 219 60091 49 60039 98 60093 34, 128 60040 98 60094 197 60042 54, 217 60095 197 60043 54, 217 60096 201 60044 54, 217 60099 201 60045 54, 217 60099 201 60046 54, 217 60100 51, 203 60050 55, 218 60101 51, 203 60051 55, 218 60104 51, 203 60052 55, 218 60104 51, 203 60053 55, 218 60107 51, 203 60055 219 60111 216 60058 55, 218 60110 216 60055 <	Part No.	Page No.	Part No.	Page No.		
60034 53, 219 60035 53, 219 60036 219 60037 219 60038 219 60039 98 60040 98 60041 15, 49 60042 54, 217 60043 54, 217 60044 54, 217 60045 54, 217 60046 54, 217 60045 54, 217 60046 54, 217 60047 55, 218 60050 55, 218 60051 55, 218 60052 55, 218 60053 55, 218 60054 55, 218 60055 219 60056 219 60057 55, 218 60058 55, 218 60059 55, 218 60060 57, 144 60061 57, 144 60062 57, 144 60063 57, 144 60064 50, 82	60032	44	60085	44		
60035 53, 219 60036 219 60037 219 60038 219 60039 98 60040 98 60041 15, 49 60042 54, 217 60043 54, 217 60044 54, 217 60045 54, 217 60046 54, 217 60048 54, 217 60049 201 60040 54, 217 60041 54, 217 60043 54, 217 60045 54, 217 60046 54, 217 60050 55, 218 60051 55, 218 60052 55, 218 60053 55, 218 60054 55, 218 60055 219 60056 219 60057 51, 203 60058 55, 218 60060 57, 144 60061 57, 144 60062 57, 144	60033	44	60086	15, 49		
60036 219 60090 49 60037 219 60091 49 60038 219 60092 33, 49, 125 60040 98 60094 197 60041 15, 49 60095 197 60042 54, 217 60096 201 60043 54, 217 60098 201 60045 54, 217 60099 201 60046 54, 217 60100 51, 203 60050 55, 218 60100 51, 203 60051 55, 218 60104 51, 203 60052 55, 218 60104 51, 203 60053 55, 218 60104 51, 203 60054 55, 218 60107 51, 203 60055 219 60110 216 60055 219 60111 216 60055 219 60111 216 60056 57, 144 60114 51, 203 60060 <t< td=""><td>60034</td><td>53, 219</td><td>60087</td><td>15, 49</td></t<>	60034	53, 219	60087	15, 49		
60037 219 60092 33, 49, 125 60039 98 60093 34, 128 60040 98 60094 197 60041 15, 49 60095 197 60042 54, 217 60096 201 60043 54, 217 60098 201 60045 54, 217 60099 201 60048 54, 217 60100 51, 203 60050 55, 218 60103 51, 203 60051 55, 218 60104 51, 203 60052 55, 218 60104 51, 203 60053 55, 218 60106 51, 203 60054 55, 218 60106 51, 203 60055 219 60111 216 60056 219 60111 216 60055 219 60111 216 60056 219 60111 216 60060 57, 144 60114 51, 203 60062	60035	53, 219	60089	54, 204		
60038 219 60092 33, 49, 125 60039 98 60093 34, 128 60040 98 60094 197 60041 15, 49 60095 197 60042 54, 217 60096 201 60043 54, 217 60098 201 60045 54, 217 60099 201 60048 54, 217 60100 51, 203 60050 55, 218 60103 51, 203 60051 55, 218 60104 51, 203 60052 55, 218 60104 51, 203 60053 55, 218 60106 51, 203 60054 55, 218 60107 51, 203 60055 219 60110 216 60056 219 60110 216 60059 55, 218 60112 51, 203 60060 57, 144 60114 51, 203 60061 57, 144 60115 51, 203	60036	219	60090	49		
60039 98 60040 98 60041 15, 49 60042 54, 217 60043 54, 217 60044 54, 217 60045 54, 217 60046 54, 217 60048 54, 217 60050 55, 218 60051 55, 218 60052 55, 218 60053 55, 218 60054 55, 218 60055 219 60056 219 60057 55, 218 60058 55, 218 60059 55, 218 60050 57, 218 60051 55, 218 60052 55, 218 60053 55, 218 60054 55, 218 60055 219 60056 219 60057 144 60060 57, 144 60061 57, 144 60062 57, 144 60065 55, 207 <td>60037</td> <td>219</td> <td>60091</td> <td>49</td>	60037	219	60091	49		
60040 98 60094 197 60041 15, 49 60095 197 60042 54, 217 60096 201 60043 54, 217 60098 201 60045 54, 217 60099 201 60048 54, 217 60100 51, 203 60050 55, 218 60101 51, 203 60051 55, 218 60103 51, 203 60052 55, 218 60104 51, 203 60053 55, 218 60104 51, 203 60054 55, 218 60106 51, 203 60055 219 60110 216 60055 219 60110 216 60058 55, 218 60107 51, 203 60059 55, 218 60110 216 60058 55, 218 60112 51, 203 60061 57, 144 60112 51, 203 60062 57, 144 60145 216 600	60038	219	60092	33, 49, 125		
60041 15, 49 60042 54, 217 60043 54, 217 60044 54, 217 60045 54, 217 60046 54, 217 60048 54, 217 60050 55, 218 60051 55, 218 60052 55, 218 60053 55, 218 60054 55, 218 60055 219 60056 219 60057 55, 218 60058 55, 218 60059 55, 218 60050 60101 51, 203 60051 55, 218 60052 55, 218 60054 55, 218 60055 219 60056 219 60057 51, 203 60060 57, 144 60061 57, 144 60062 57, 144 60063 57, 144 60064 50, 82 60065 55, 207	60039	98	60093	34, 128		
60042 54, 217 60043 54, 217 60044 54, 217 60045 54, 217 60046 54, 217 60048 54, 217 60050 55, 218 60051 55, 218 60052 55, 218 60053 55, 218 60054 55, 218 60055 219 60056 219 60058 55, 218 60050 57, 218 60051 55, 218 60052 55, 218 60053 55, 218 60054 55, 218 60055 219 60056 219 60057 51, 203 60060 57, 144 60061 57, 144 60062 57, 144 60063 57, 144 60064 50, 82 60065 55, 207 60066 55, 207 60067 16,49 60072 49	60040	98	60094	197		
60043 54, 217 60044 54, 217 60045 54, 217 60046 54, 217 60048 54, 217 60050 55, 218 60051 55, 218 60052 55, 218 60053 55, 218 60054 55, 218 60055 219 60056 219 60057 55, 218 60058 55, 218 60059 55, 218 60050 60100 60051 55, 218 60052 55, 218 60053 55, 218 60054 55, 218 60055 219 60056 219 60057 51, 203 60060 57, 144 60061 57, 144 60062 57, 144 60063 57, 144 60064 50, 82 60065 55, 207 60066 55, 207 60067 16,49 <td>60041</td> <td>15, 49</td> <td>60095</td> <td>197</td>	60041	15, 49	60095	197		
60044 54, 217 60098 201 60045 54, 217 60099 201 60046 54, 217 60100 51, 203 60050 55, 218 60103 51, 203 60051 55, 218 60104 51, 203 60052 55, 218 60106 51, 203 60053 55, 218 60107 51, 203 60054 55, 218 60108 119, 204 60055 219 60110 216 60056 219 60111 216 60059 55, 218 60112 51, 203 60059 55, 218 60112 51, 203 60060 57, 144 60114 51, 203 60061 57, 144 60115 51, 203 60062 57, 144 60115 51, 203 60063 57, 144 60134 216 60064 50, 82 60135 216 60065 55, 207 60138 216	60042	54, 217	60096	201		
60045 54, 217 60099 201 60046 54, 217 60100 51, 203 60050 55, 218 60101 51, 203 60051 55, 218 60104 51, 203 60052 55, 218 60106 51, 203 60053 55, 218 60106 51, 203 60054 55, 218 60107 51, 203 60055 219 60110 216 60056 219 60111 216 60058 55, 218 60112 51, 203 60059 55, 218 60112 51, 203 60059 55, 218 60112 51, 203 60059 55, 218 60112 51, 203 60060 57, 144 60114 51, 203 60061 57, 144 60115 51, 203 60062 57, 144 60126 216 60063 57, 144 60134 216 60064 50, 82 60138 216 <tr< td=""><td>60043</td><td>54, 217</td><td>60097</td><td>201</td></tr<>	60043	54, 217	60097	201		
60046 54, 217 60100 51, 203 60048 54, 217 60101 51, 203 60050 55, 218 60103 51, 203 60051 55, 218 60104 51, 203 60052 55, 218 60106 51, 203 60053 55, 218 60107 51, 203 60054 55, 218 60107 51, 203 60055 219 60110 216 60056 219 60110 216 60058 55, 218 60112 51, 203 60059 55, 218 60112 51, 203 60060 57, 144 60114 51, 203 60061 57, 144 60115 51, 203 60062 57, 144 60126 216 60063 57, 144 60134 216 60064 50, 82 60135 216 60065 55, 207 60136 216 60067 16,49 60140 216	60044	54, 217	60098	201		
60048 54, 217 60101 51, 203 60050 55, 218 60103 51, 203 60051 55, 218 60104 51, 203 60052 55, 218 60106 51, 203 60053 55, 218 60107 51, 203 60054 55, 218 60108 119, 204 60055 219 60110 216 60056 219 60111 216 60058 55, 218 60112 51, 203 60059 55, 218 60112 51, 203 60060 57, 144 60114 51, 203 60061 57, 144 60115 51, 203 60062 57, 144 60115 51, 203 60063 57, 144 60134 216 60064 50, 82 60135 216 60065 55, 207 60136 216 60067 16,49 60140 216 60072 49 60144 215	60045	54, 217	60099	201		
60050 55, 218 60103 51, 203 60051 55, 218 60104 51, 203 60052 55, 218 60106 51, 203 60053 55, 218 60107 51, 203 60054 55, 218 60108 119, 204 60055 219 60110 216 60056 219 60111 216 60058 55, 218 60112 51, 203 60059 55, 218 60112 51, 203 60060 57, 144 60114 51, 203 60061 57, 144 60115 51, 203 60062 57, 144 60126 216 60063 57, 144 60134 216 60064 50, 82 60135 216 60065 55, 207 60136 216 60066 55, 207 60138 216 60067 16,49 60140 216 60072 49 60144 215 6007	60046	54, 217	60100	51, 203		
60051 55, 218 60104 51, 203 60052 55, 218 60106 51, 203 60053 55, 218 60107 51, 203 60054 55, 218 60108 119, 204 60055 219 60110 216 60056 219 60111 216 60058 55, 218 60112 51, 203 60059 55, 218 60113 51, 203 60060 57, 144 60114 51, 203 60061 57, 144 60115 51, 203 60062 57, 144 60126 216 60063 57, 144 60134 216 60064 50, 82 60135 216 60065 55, 207 60136 216 60066 55, 207 60138 216 60067 16,49 60140 216 60072 49 60144 215 60073 51, 204 60145 215 60074 <td>60048</td> <td>54, 217</td> <td>60101</td> <td>51, 203</td>	60048	54, 217	60101	51, 203		
60052 55, 218 60106 51, 203 60053 55, 218 60107 51, 203 60054 55, 218 60108 119, 204 60055 219 60110 216 60056 219 60111 216 60058 55, 218 60112 51, 203 60059 55, 218 60113 51, 203 60060 57, 144 60114 51, 203 60061 57, 144 60115 51, 203 60062 57, 144 60126 216 60063 57, 144 60134 216 60064 50, 82 60135 216 60065 55, 207 60136 216 60066 55, 207 60138 216 60067 16,49 60140 216 60072 49 60141 216 60073 51, 204 60145 215 60074 238 60146 215 60075	60050	55, 218	60103	51, 203		
60053 55, 218 60107 51, 203 60054 55, 218 60108 119, 204 60055 219 60110 216 60056 219 60111 216 60058 55, 218 60112 51, 203 60059 55, 218 60113 51, 203 60060 57, 144 60114 51, 203 60061 57, 144 60115 51, 203 60062 57, 144 60126 216 60063 57, 144 60134 216 60064 50, 82 60135 216 60065 55, 207 60136 216 60066 55, 207 60138 216 60067 16,49 60140 216 60072 49 60141 216 60073 51, 204 60144 215 60074 238 60145 215 60075 53,238 60147 215 60076 <t< td=""><td>60051</td><td>55, 218</td><td>60104</td><td>51, 203</td></t<>	60051	55, 218	60104	51, 203		
60054 55, 218 60108 119, 204 60055 219 60110 216 60056 219 60111 216 60058 55, 218 60112 51, 203 60059 55, 218 60113 51, 203 60060 57, 144 60114 51, 203 60061 57, 144 60115 51, 203 60062 57, 144 60126 216 60063 57, 144 60134 216 60064 50, 82 60135 216 60065 55, 207 60136 216 60067 16,49 60140 216 60072 49 60140 216 60072 49 60144 215 60073 51, 204 60145 215 60074 238 60146 215 60075 53,238 60147 215 60076 49 60148 207 60079 54, 204	60052	55, 218	60106	51, 203		
60055 219 60110 216 60056 219 60111 216 60058 55, 218 60112 51, 203 60059 55, 218 60113 51, 203 60060 57, 144 60114 51, 203 60061 57, 144 60115 51, 203 60062 57, 144 60126 216 60063 57, 144 60134 216 60064 50, 82 60135 216 60065 55, 207 60136 216 60066 55, 207 60138 216 60067 16,49 60140 216 60072 49 60140 216 60072 49 60144 215 60074 238 60145 215 60075 53,238 60146 215 60076 49 60148 207 60077 52, 193 60150 207 60080 52, 193	60053	55, 218	60107	51, 203		
60056 219 60111 216 60058 55, 218 60112 51, 203 60059 55, 218 60113 51, 203 60060 57, 144 60114 51, 203 60061 57, 144 60115 51, 203 60062 57, 144 60126 216 60063 57, 144 60134 216 60064 50, 82 60135 216 60065 55, 207 60136 216 60067 16,49 60140 216 60072 49 60140 216 60072 49 60144 215 60074 238 60145 215 60075 53,238 60146 215 60076 49 60148 207 60077 52, 193 60149 208 60078 193 60150 207 60080 52, 193 60150 207 60081 52, 193	60054	55, 218	60108	119, 204		
60058 55, 218 60059 55, 218 60060 57, 144 60061 57, 144 60062 57, 144 60063 57, 144 60064 50, 82 60065 55, 207 60066 55, 207 60067 16,49 60072 49 60073 51, 204 60074 238 60075 53,238 60076 49 60077 52, 193 60078 193 60079 54, 204 60081 52, 193 60082 52, 193 60058 52, 193 60159 208	60055	219	60110	216		
60059 55, 218 60113 51, 203 60060 57, 144 60114 51, 203 60061 57, 144 60115 51, 203 60062 57, 144 60126 216 60063 57, 144 60134 216 60064 50, 82 60135 216 60065 55, 207 60136 216 60066 55, 207 60138 216 60067 16,49 60140 216 60072 49 60141 216 60072 49 60144 215 60073 51, 204 60145 215 60074 238 60146 215 60075 53,238 60147 215 60076 49 60148 207 60077 52, 193 60150 207 60080 52, 193 60150 207 60081 52, 193 60159 208 60159 208	60056	219 6011		216		
60060 57, 144 60114 51, 203 60061 57, 144 60115 51, 203 60062 57, 144 60126 216 60063 57, 144 60134 216 60064 50, 82 60135 216 60065 55, 207 60136 216 60066 55, 207 60138 216 60067 16,49 60140 216 60072 49 60141 216 60072 49 60144 215 60073 51, 204 60145 215 60074 238 60146 215 60075 53,238 60147 215 60076 49 60148 207 60077 52, 193 60150 207 60078 193 60150 207 60080 52, 193 60156 207 60081 52, 193 60159 208 60159 208 </td <td>60058</td> <td>55, 218</td> <td>60112</td> <td>51, 203</td>	60058	55, 218	60112	51, 203		
60061 57, 144 60115 51, 203 60062 57, 144 60126 216 60063 57, 144 60134 216 60064 50, 82 60135 216 60065 55, 207 60136 216 60066 55, 207 60138 216 60067 16,49 60140 216 60068 49 60141 216 60072 49 60144 215 60073 51, 204 60145 215 60074 238 60146 215 60075 53,238 60147 215 60076 49 60148 207 60077 52, 193 60150 207 60078 193 60150 207 60080 52, 193 60156 207 60081 52, 193 60159 208	60059	55, 218	60113	51, 203		
60062 57, 144 60126 216 60063 57, 144 60134 216 60064 50, 82 60135 216 60065 55, 207 60136 216 60066 55, 207 60138 216 60067 16,49 60140 216 60068 49 60141 216 60072 49 60144 215 60073 51, 204 60145 215 60074 238 60146 215 60075 53,238 60147 215 60076 49 60148 207 60077 52, 193 60149 208 60078 193 60150 207 60080 52, 193 60157 56, 207 60081 52, 193 60158 207 60082 52, 193 60159 208	60060	57, 144	60114	51, 203		
60063 57, 144 60134 216 60064 50, 82 60135 216 60065 55, 207 60136 216 60066 55, 207 60138 216 60067 16,49 60140 216 60068 49 60141 216 60072 49 60144 215 60073 51, 204 60145 215 60074 238 60146 215 60075 53,238 60147 215 60076 49 60148 207 60077 52, 193 60149 208 60078 193 60150 207 60080 52, 193 60156 207 60081 52, 193 60158 207 60082 52, 193 60159 208	60061	57, 144	60115	51, 203		
60064 50, 82 60135 216 60065 55, 207 60136 216 60066 55, 207 60138 216 60067 16,49 60140 216 60068 49 60141 216 60072 49 60144 215 60073 51, 204 60145 215 60074 238 60146 215 60075 53,238 60147 215 60076 49 60148 207 60077 52, 193 60149 208 60078 193 60150 207 60080 52, 193 60156 207 60081 52, 193 60158 207 60082 52, 193 60159 208	60062	57, 144	60126	216		
60065 55, 207 60136 216 60066 55, 207 60138 216 60067 16,49 60140 216 60068 49 60141 216 60072 49 60144 215 60073 51, 204 60145 215 60074 238 60146 215 60075 53,238 60147 215 60076 49 60148 207 60077 52, 193 60149 208 60078 193 60150 207 60080 52, 193 60156 207 60081 52, 193 60158 207 60082 52, 193 60159 208	60063	57, 144	60134	216		
60066 55, 207 60138 216 60067 16,49 60140 216 60068 49 60141 216 60072 49 60144 215 60073 51, 204 60145 215 60074 238 60146 215 60075 53,238 60147 215 60076 49 60148 207 60077 52, 193 60149 208 60078 193 60150 207 60080 52, 193 60156 207 60081 52, 193 60158 207 60082 52, 193 60159 208	60064	50, 82	60135	216		
60067 16,49 60140 216 60068 49 60141 216 60072 49 60144 215 60073 51, 204 60145 215 60074 238 60146 215 60075 53,238 60147 215 60076 49 60148 207 60077 52, 193 60149 208 60078 193 60150 207 60080 52, 193 60156 207 60081 52, 193 60158 207 60082 52, 193 60159 208	60065	55, 207	60136	216		
60068 49 60072 49 60073 51, 204 60074 238 60075 53,238 60076 49 60077 52, 193 60078 193 60079 54, 204 60080 52, 193 60081 52, 193 60082 52, 193 60159 208 60159 208	60066	55, 207	60138	216		
60072 49 60073 51, 204 60074 238 60075 53,238 60076 49 60077 52, 193 60078 193 60079 54, 204 60080 52, 193 60081 52, 193 60082 52, 193 60159 208 60159 208	60067	16,49	60140	216		
60073 51, 204 60145 215 60074 238 60146 215 60075 53,238 60147 215 60076 49 60148 207 60077 52, 193 60149 208 60078 193 60150 207 60079 54, 204 60156 207 60080 52, 193 60157 56, 207 60081 52, 193 60158 207 60082 52, 193 60159 208	60068	49	60141	216		
60074 238 60075 53,238 60076 49 60077 52, 193 60078 193 60079 54, 204 60080 52, 193 60081 52, 193 60082 52, 193 60159 208	60072	49	60144	215		
60075 53,238 60147 215 60076 49 60148 207 60077 52, 193 60149 208 60078 193 60150 207 60079 54, 204 60156 207 60080 52, 193 60157 56, 207 60081 52, 193 60158 207 60082 52, 193 60159 208	60073	51, 204	60145	215		
60076 49 60077 52, 193 60078 193 60079 54, 204 60080 52, 193 60081 52, 193 60082 52, 193 60159 208	60074	238	60146	215		
60077 52, 193 60078 193 60079 54, 204 60080 52, 193 60081 52, 193 60082 52, 193 60159 208	60075	53,238	60147	215		
60078 193 60150 207 60079 54, 204 60156 207 60080 52, 193 60157 56, 207 60081 52, 193 60158 207 60082 52, 193 60159 208	60076	49	60148	207		
60078 193 60079 54, 204 60080 52, 193 60081 52, 193 60082 52, 193 60159 207 60159 208	60077	52, 193	60149	208		
60080 52, 193 60081 52, 193 60082 52, 193 60159 208	60078	193	60150			
60081 52, 193 60082 52, 193 60159 208	60079	54, 204	60156	207		
60082 52, 193 60159 208	60080			56, 207		
60082 52, 193 60159 208	60081	52, 193	60158	207		
	60082		60159	208		
	60083		60160			
60084 52, 193 60162 54, 205	60084	52, 193	60162	54, 205		

	PERFO
Part No.	Page No.
60163	54, 205
60165	54, 205
60166	56, 207
60167	54,205
60170	206
60176	207
60178	207
60180	207
60181	207
60182	205
60183	205
60185	53, 207
60186	54, 217
60187	217
60188	54, 217
60189	217
60190	52, 193
60192	217
60193	217
60194	217
60195	217
60196	217
60197	217
60198	217
60200	193
60201	193
60203	193
60204	193
60205	193
60206	193
60207	193
60208	193
60209	193
60210	193
60215	53
60218	214
60220	51, 204
60221	51, 204
60222	51, 204
60224	51, 204
60225	51, 204
60230	50, 204
60232	205
60233	205
60238	206
60239	206

Part No	Page No.
60243	205
60244	205
60245	205
60247	206
60270	206
60272	206
60273	206
60274	206
60275	206
60280	206
60282	206
60285	206
60286	206
60287	206
60288	206
	51, 119,
60300	204
60301	51, 119, 204
	51, 119,
60302	204
60304	51, 119, 204
60306	51, 119, 204
60308	51, 119, 204
60310	51, 119, 204
60312	51, 119, 204
60314	51, 119, 204
60318	51, 119, 204
60320	51, 119, 204
60322	51, 119, 204
60324	51, 119, 204
60326	51, 119, 204
60328	51, 119, 204
60330	51, 119, 204
60335	51, 119, 204
60336	51, 119, 204
60350	82

Part No.	Page No.
60352	82
60353	82
60360	50, 84
60361	50, 84
60404	214
60406	214
60410	216
60500	56
60510	219
60511	219
60512	219
60513	219
60514	219
60515	219
64100	202
64130	201
64136	201
64141	201
64143	201
64145	201
64146	201
64147	201
64149	201
64151	201
64154	201
64157	201
64158	201
64160	201
64161	201
64162	201
64163	201
64164	201
64165	201
64167	201
64169	201
64170	201
64171	201
64172	201
64173	201
64174	201
64175	201
64177	201
64178	201
64180	201
	201
64185	201
64185 64195	

Part No.	Page No.		
64197	201		
64198	202		
64200	202		
64201	202		
64202	173, 202		
64203	173, 202		
64204	202, 208		
64205	202, 208		
64206	202, 208		
64207	202, 208		
64208	202, 208		
64209	202, 208		
64210	202		
64212	202		
64214	202		
64216	199		
64218	199		
64220	202		
64222	202		
64230	202		
64232	202		
64234	202		
64255	198,249		
64260	198, 249		
64264	198, 249		
64267	198, 249		
64269	201		
64270	201		
64271	201		
64272	201		
64273	201		
64274	199		
64275	199		
64276	199		
64277	199		
64280	118, 203, 213		
64282	118, 203, 213		
64283	118, 203, 213		
64284	118, 203, 213		
64300	215		
64302	215		
64312	215		
64314	215		
64315	214		



Part No.	Page No.										
64320	199	64379	199	66281	149	66400	149	68208	150	68325	214
64323	199	64380	199	66285	149	66401	149	68210	150	68326	34, 215
64324	199	64381	199	66286	149	67276	149	68212	150	68327	215
64325	199	64384	199	66290	149	67281	149	68213	150	68328	215
64326	199	64385	199	66291	149	67286	149	68216	150	68330	53, 147
64327	199	64386	199	66295	149	67291	149	68218	150	68332	215
64328	199	64400	200	66296	149	67296	149	68220	150	68333	215
64329	199	64402	200	66300	149	67301	149	68222	150	68336	214
64330	199	64404	200	66301	149	67306	149	68224	150	68337	214
64331	199	64410	200	66305	149	67311	149	68226	150	68338	215
64332	199	64412	200	66306	149	67316	149	68228	150	68339	215
64333	199	64414	200	66310	149	67321	149	68230	150	68340	195
64334	199	64416	200	66311	149	67326	149	68231	150	68341	195
64335	199	64418	200	66315	149	67331	149	68232	150	68342	195
64336	199	64420	200	66316	149	67336	149	68234	150	68344	219
64337	199	64422	200	66320	149	67500	148	68235	150	68346	151
64338	199	64424	200	66321	149	67501	148	68240	150	68347	151
64339	199	64440	200	66325	149	67502	148	68244	150	68370	147, 250
64340	199	64442	200	66326	149	67503	148	68246	150	68372	155, 250
64341	199	64444	200	66330	149	68060	154	68248	150	68375	155
64344	199	64450	200	66331	149	68062	154	68252	150	68376	155
64345	199	64452	200	66335	149	68063	154	68256	150	68377	155
64346	199	64454	200	66336	149	68064	154	68258	150	68380	155
64348	200	64456	200	66340	149	68066	154	68260	150	68382	155
64349	200	64458	200	66341	149	68067	154	68264	150	68384	155
64350	200	64460	200	66345	149	68070	154	68266	150	68385	155
64352	200	64462	200	66346	149	68072	154	68268	150	68386	155
64353	200	64464	200	66350	149	68074	154	68270	150	68387	155
64354	200	64500	173, 200	66351	149	68114	154	68272	150	68388	155
64356	200	64501	173, 200	66355	149	68115	154	68274	150	68396	155
64357	200	64502	173, 200	66356	149	68120	154	68276	150	68509	152
64358	200	64505	200	66360	149	68121	154	68278	150	68510	152
64360	199	64510	200	66361	149	68122	154	68280	150	68511	152
64364	199	64511	200	66365	149	68160	154	68300	150	68512	152
64365	199	64512	200	66366	149	68161	154	68302	150	68513	152
64366	199	64514	200	66370	149	68162	154	68304	150	68515	152
64367	199	66100	149	66371	149	68163	154	68308	148	68518	152
64368	199	66104	149, 250	66375	149	68164	154	68309	148	68519	152
64369	199	66115	149, 250	66376	149	68165	154	68313	214	68521	152
64370	199	66120	154	66380	149	68167	154	68314	214	68531	152
64371	199	66121	154	66381	149	68168	154	68315	214	68532	152
64372	199	66265	149	66385	149	68200	150	68316	214	68533	152
64373	199	66266	149	66386	149	68201	150	68317	214	68534	152
64374	199	66270	149	66390	149	68202	150	68318	214	68537	152
64376	199	66275	149	66391	149	68203	150	68320	151, 215	68538	152
64377	199	66276	149	66395	149	68204	150	68322	151, 215	68539	152
64378	199	66280	149	66396	149	68206	150	68324	215	68540	152
3 7370	,,,	30200	143	30330	173	30200	150	30327	213	30340	132



Dart No	Page No.	Dart No.	Page No.	
68541	152	69018	155	
68542	152	69019	156	
68543	152			
		69020	156	
68610	152	69022	156	
68611	152	69023	156	
68613	152	69024	156	
68615	152	69025	155	
68616	152	69030	155, 255	
68618	152	69031	155, 255	
68619	152	69032	155, 255	
68621	152	69034	155, 255	
68622	152	69035	155, 255	
68631	152	69036	155, 255	
68633	152	69037	155, 255	
68634	152	69040	156, 255	
68637	152	69042	156, 255	
68639	152	69043	156, 255	
68700	147	69044	156, 255	
68702	147	69045	156, 255	
68703	147	69046	156, 255	
68704	147	69047	156, 255	
68706	147	69048	156, 255	
68708	147	69100	253	
68709	147	69102	253	
68710	147	69104	253	
68711	147	69107	253	
68756	148	69108	253	
68757	148	69110	253	
68758	148	69111	253	
68759	148	69112	253	
68820	147	69113	253	
68822	147	69116	253	
68824	147	69117	253	
68830	147	69118	253	
68832	147	69120	253	
68834	147	69121	253	
69000	53, 156	69124	253	
69002	53, 156	69126	253	
69004	53, 156	69127	253	
69006	53, 156	69128	253	
69010	163, 254	69129	253	
69011	89, 163	69130	253	
69013	163 70010		153	
69014	155	70010	153	
69015			153	
02013	155 70014		155	
69016	155	155 70016		

	\
D (N	
	Page No.
70020	153
70022	153
70024	153
70026	153
70028	153
70030	153
70032	153
70034	153
70036	153
70038	153
70040	153
70042	153
70044	153
70100	153
70110	153
70112	153
70113	153
70114	153
70120	153
70122	153
70124	153
70124	153
70128	153 154, 24,
72040	154, 24,
72043	148
72044	154
72045	154
72050	151, 177
72052	151, 177
72054	151
72060	151, 177
72064	151, 177
72066	151, 177
72074	151
72075	151
72078	207
72099	149
72100	149
72101	149
72102	149
72103	149
72104	149
72105	149
72108	149
72114	146
72115	146

Part No.	Page No.		
72120	146		
72121	146		
72122	146		
72123	146		
72124	146		
72125	146		
72126	22, 146		
72128	22, 146		
72140	151		
72142	149		
72143	155		
72144	155		
72145	155		
72146	155		
72147	155		
72148	155		
72150	156, 255		
72152	156, 255		
72155	155		
72156	155		
72160	22, 146		
72161	22, 146		
72164	22, 146		
72165	22, 146		
72173	146		
72176	145		
72200	145		
72202	145		
72210	145		
72212	145		
72215	145		
72216	145		
72217	145		
72225	145		
72230	145		
72231	145		
72245	145		
72246	145		
72247	145		
72255	145		
72256	145		
72260	145 22, 145		
72270			
72274	22, 145		
72275	22, 145		
72277	22, 145		
72278	22, 145		

Part No.	Page No.		
72290	145		
72291	145		
72292	145		
72293	145		
72294	145		
72300	145		
72301	145		
72302	145		
72303	145		
72303	22, 145,		
72305	187		
72306	22, 145, 187		
72308	22, 145, 187		
72309	22, 145, 187		
72310	145		
72311	145		
72313	145		
72314	145		
72315	148		
72316	148		
72317	148		
72318	24, 148		
72319	24, 148		
72320	146		
72322	146		
72323	146		
72324	146		
72325	146		
72330	214		
72332	214		
72336	174		
72336	174		
72338	174		
76000	75		
76000	75		
76001	75		
76002			
76003	75		
	75		
76005	75		
76006	75		
76007	75		
76008	75		
76010	75		
76011	75		
76012	75		

Part No.	Page No.
76013	75
76014	75
76015	75
76016	75
76017	75
76018	75
76020	75
76021	75
76022	75
76023	75
76024	75
76025	75
76026	75
76027	75
76028	75
76030	75
76031	75
76032	75
76033	75
76034	75
76035	75
76036	75
76037	75
76038	75
76040	75
76041	75
76042	75
76043	75
76044	75
76045	75
76046	75
76047	75
76048	75
76050	75
76051	75
76052	75
76053	75
76054	75
76055	75
76056	75
76057	75
76058	75
76060	75
76061	75
76062	75
76063	75
76064	75



Part No.	Page No.	Part No.	Page No.
76065	75	76135	79, 233
76066	75	76137	79
76067	75	76138	79
76068	75	76139	82
76070	75	76140	82
76071	75	76141	82
76072	75	76142	79
76073	75	76146	77
76074	75	76147	50,79
76075	75	76152	79
76076	75	76153	79
76077	75	76154	79
76078	75	76160	76
76080	75	76162	76
76081	75	76163	76
76082	75	76164	76
76083	75	76165	76
76084	75	76166	76
76085	75	76167	76
76086	75	76170	77
76087	75	76172	77
76088	75	76180	77
76090	77	76186	77
76091	77	76188	77
76099	78	76197	139
76100	50, 78	76198	139
76101	50, 78	76201	81
76102	50, 78	76202	81
76103	50, 78	76203	81
76105	50, 78	76205	229
76107	78	76206	82, 229
76110	78	76208	81
76111	78	76209	81
76112	78	76212	77
76114	78	76215	76, 233
76115	78	76216	74
76116	79	76220	75, 233
76117	79	76221	74, 233
76118	79	76224	75
76119	79	76231	74
76120	79	76232	74
76122	79	76233	74
76128	79	76234	74
76129	79	76235	74
76131	79, 82	76250	28, 77
76132	79	76251	28, 77
76133	79, 82	76252	28, 77

Part No.	Page No.
76253	28, 77
76255	28, 77
76260	74
76262	74
76264	74, 233
76265	74
76266	74
76267	74
76268	74
76269	74
76270	74
76272	74
76273	74
76274	74
76275	74
76276	74
76277	74
76280	74
76281	74
76282	74
76283	74
76300	82
76301	82
76302	82
76310	82
76311	82
76312	82
76320	82
76321	82
76322	82
76323	82
76328	78
76330	78
76341	78
76400	162
76401	162
76404	162
76405	162
76406	162
76407	162
76409	162
76415	91, 166
76416	91, 166
76420	65, 91, 166
76422	91, 166
76424	91, 166
76428	139

		S	
	Page No.		Page No.
76430	82	76602	73
76432	82	76604	73
76434	82	76610	73
76436	82	76614	73
76500	73	76616	73
76501	73	76618	73
76502	73	78100	61
76503	73	78101	60
76504	73	78105	60
76505	73	78107	60
76506	73	78108	35, 60
76510	73	78110	60
76511	73	78111	60
76512	73	78115	35, 60
76513	73	78116	35, 60
76514	73	78117	35, 60
76515	73	78118	35, 60
76516	73	78120	61
76540	73	78122	61
76541	73	78123	61
76542	73	78124	61
76543	73	78125	61
76544	73	78126	61
76545	73	78127	61
76546	73	78128	61
76550	73	78129	61
76551	73	78130	61
76552	73	78131	61
76553	73	78132	61
76554	73	78133	61
76555	73	78134	61
76556	73	78135	61
76560	73	78136	61
76561	73	78137	61
76562	73	78138	61
76563	73	78139	61
76565	73	78200	59
76566	73	78201	59
76567	73	78202	59
76568	73	78203	59
76570	73	78205	59
76571	73	78211	58
76572	73	78213	58
76575	73	78220	61, 99
76576	73	78222	8, 58
76577	73	78230	21, 58, 168
76600	73	78232	21, 58, 168

	Page No.
78234	21, 58
78236	58, 247, 261
78240	145
78241	145
78242	145
78246	61, 149, 250
78250	153
80085	262
80086	262
80090	83
80091	83
80092	83
80093	83
80095	83
80096	83
80097	83
80098	83
80099	83
80110	83
80112	83
80113	83
80114	83
80120	83
80122	83
80123	83
80125	83
80126	83
80127	83
80128	83
80129	80
80134	83
80136	83
80138	84
80140	84
80141	84
80142	84
80146	84
80152	80
80153	80
80154	80
80155	80
80156	80
80157	80
80158	80
80159	80

Part No. Page No.



Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
80160	84	81208	86	81365	88	87216	95	90041	90, 134	92025	90
80162	84	81210	86	81366	88	87220	99	90042	90, 134	92027	90
80164	84	81211	86	81370	88	87230	68, 99	90043	90, 134	92040	89
80165	84	81212	86	81371	88	87231	99	90044	90, 134	92041	89
80168	84	81213	86	81380	88	87236	99	90045	90, 134	92043	89
80170	29	81214	74, 86	81381	88	87238	99	90048	90, 134	96400	97, 229
80172	29	81215	74, 86	81400	87	87240	99	90050	94	96401	97, 229
80175	84	81216	85	81401	87	87250	99	90052	94	96402	97, 229
80176	84	81218	85	81402	87	87260	98	90053	94	96403	97, 229
80177	84	81220	85	81403	87	87262	98	90054	94	96410	153, 225
80180	84	81221	85	86120	68, 69, 179	87264	98	90055	94	96411	153, 225
80181	84	81222	85	86121	69, 179	87266	98	90060	94	96412	200, 249
80200	136	81224	85	86122	68, 69, 179	87268	98	90065	92	96414	153, 225
80202	136	81225	85	86123	69, 179	87280	93	90067	91	96415	153, 225
80204	136	81226	85	86124	68, 69, 179	87282	93	90068	91	96416	153, 225
80206	136	81227	85	86125	69, 179	90000	94	90070	91	96420	229
80208	136	81228	85	86127	69	90000	165	90071	91	96421	229
80210	136	81229	85	86128	69	90001	94	90072	91	96424	230
80214	136	81230	87	86129	69	90002	94	90073	91	96426	230, 254
80216	136	81230	85, 87	86130	69	90003	94	90075	90, 134	96440	174, 225
80218	136	81232	85, 87	86132	69	90008	93	90076	90, 134	96470	94, 228
80220	136	81234	87	86134	69	90009	93	90080	94, 165	96475	89, 228
80222	136	81240	85	86136	69	90010	93	90081	94, 165	96478	228
80224	136	81242	85	86138	69	90012	93	90085	94, 165	96480	228
80226	136	81244	85	87000	97	90014	93	90086	94, 165	96482	228
80250	72, 83	81246	85	87002	97	90015	93	90087	94, 165	96483	228
80500	82	81248	85	87004	97	90016	93	90088	94, 165	96484	228
80501	82	81250	85	87005	97	90017	93	90089	94, 165	96485	228
80505	82	81252	85	87006	97	90018	93	90090	93	96490	229
80515	81	81254	85	87010	97	90019	93	90100	94, 165	96505	88, 229
80516	81	81255	86	87020	97	90020	94	90106	92	96506	88, 229
80520	81	81300	86	87024	97	90021	94	90107	92	96510	88, 229
80521	81, 132	81308	86	87026	97	90022	94	90230	97	96515	88, 229
80522	81	81309	86	87028	97	90023	94	90235	97	96516	88, 229
80523	81	81310	86	87030	94	90024	94	90240	97	96520	230
80524	81	81311	86	87032	94	90025	94	90241	97	96525	228
80525	81	81315	86	87034	94	90026	94	90242	97	98100	160
80526	81	81324	87	87040	89	90027	94	90244	97	98110	160
80527	81	81326	87	87200	99, 140	90028	93	90250	97	98111	160
80530	81	81330	87, 170	87202	99, 140	90029	93	92000	90, 134	98112	160
80532	81	81332	87, 170	87204	99, 140	90030	94	92001	90, 134	98113	160
81200	86	81340	88	87206	99, 140	90031	94	92003	90, 134	98115	160
81202	86	81341	88	87207	7, 99	90034	94	92004	90, 134	98116	160
81204	86	81345	88	87210	95	90035	94	92005	134	98117	160
81205	86	81350	88	87212	95	90036	94	92006	134	98118	160
81206	86	81360	88	87214	95	90037	94	92020	90, 134	98120	160
81207	86	81361	88	87215	95	90040	90, 134	92022	90	98125	172



Part No.	Page No.
98130	160
99010	208
99011	208
99012	208
99013	15, 221
99014	15, 221
99015	252
99016	252
99020	197
99021	161
99022	161
99023	161
99027	67
99028	144
99029	144
99030	72, 135
99043	163
99044	242
99045	80
99052	52, 195
99055	53, 219
99056	83
99057	83
99058	83
99059	83
99062	83
99063	83
99064	83
99065	83
99066	84
99068	84
99069	84

99070 158 99071 158 99091 189 99093 189 99094 189 99096 189 99097 189 99098 189 99100 51, 203 99101 51, 203 99102 107, 224 99104 246, 260 99105 246, 260 99106 246, 260 99107 246, 260 99108 178, 244 99109 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99134 245 99136 70			
99071 158 99092 189 99093 189 99094 189 99096 189 99096 189 99097 189 99098 189 99100 51, 203 99101 51, 203 99102 107, 224 99104 246, 260 99105 246, 260 99106 246, 260 99107 246, 260 99108 178, 244 99109 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	Part No.	Page No.	Par
99092 189 99093 189 99093 189 99094 189 99096 189 99096 189 99097 189 99098 189 99100 51, 203 99101 51, 203 99102 107, 224 99104 246, 260 99105 246, 260 99106 246, 260 99107 246, 260 99108 178, 244 99109 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99126 20 99127 246, 260 99134 245 99136 70	99070	158	99
99093 189 99094 189 99096 189 99097 189 99098 189 99100 51, 203 99101 51, 203 99102 107, 224 99104 246, 260 99105 246, 260 99106 246, 260 99107 246, 260 99108 178, 244 99109 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99071	158	99
99094 189 99096 189 99097 189 99098 189 99100 51, 203 99101 51, 203 99102 107, 224 99104 246, 260 99105 246, 260 99106 246, 260 99107 246, 260 99108 178, 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99092	189	99
99096 189 99097 189 99097 189 99098 189 99100 51, 203 99101 51, 203 99102 107, 224 99104 246, 260 99105 246, 260 99106 246, 260 99107 246, 260 99108 178, 244 99109 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99093	189	99
99097 189 99098 189 99100 51, 203 99101 51, 203 99102 107, 224 99104 246, 260 99105 246, 260 99106 246, 260 99107 246, 260 99108 178, 244 99109 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99094	189	99
99098 189 99100 51, 203 99101 51, 203 99102 107, 224 99104 246, 260 99105 246, 260 99106 246, 260 99107 246, 260 99108 178, 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99096	189	99
99100 51, 203 99101 51, 203 99101 51, 203 99102 107, 224 99104 246, 260 99105 246, 260 99106 246, 260 99107 246, 260 99108 178, 244 99109 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99097	189	99
99101 51, 203 99102 107, 224 99104 246, 260 99105 246, 260 99106 246, 260 99107 246, 260 99108 178, 244 99109 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99098	189	99
99102 107, 224 99104 246, 260 99105 246, 260 99106 246, 260 99107 246, 260 99108 178, 244 99109 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99100	51, 203	99
99104 246, 260 99105 246, 260 99106 246, 260 99107 246, 260 99108 178, 244 99109 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99136 70	99101	51, 203	99
99105 246, 260 99106 246, 260 99107 246, 260 99108 178, 244 99109 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99134 245 99136 70	99102	107, 224	99
99106 246, 260 99107 246, 260 99108 178, 244 99109 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99104	246, 260	99
99107 246, 260 99108 178, 244 99109 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99105	246, 260	99
99108 178, 244 99109 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99106	246, 260	99
99109 244 99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99107	246, 260	99
99112 206 99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99108	178, 244	99
99113 206 99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99109	244	99
99114 206 99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99112	206	99
99115 206 99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99113	206	99
99116 29 99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99114	206	99
99117 29 99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99115	206	99
99124 20 99125 20 99126 20 99127 246, 260 99134 245 99136 70	99116	29	99
99125 20 9 99126 20 9 99127 246, 260 9 99134 245 9 99136 70 9	99117	29	99
99126 20 99127 246, 260 99134 245 99136 70	99124	20	99
99127 246, 260 99134 245 99136 70	99125	20	99
99134 245 9 99136 70	99126	20	99
99136 70 9	99127	246, 260	99
	99134	245	99
	99136	70	99
99145 83 9	99145	83	99
99146 84 9	99146	84	99
99147 83 9	99147	83	99

Part No.	Page No.
99150	263
99151	263
99160	158
99161	158
99162	158
99163	158
99165	257
99173	15, 221
99174	15, 221
99175	50, 78
99176	50, 78
99177	50, 78
99178	208
99179	208
99250	194
99273	240
99274	240
99275	240
99276	240
99277	240
99278	240
99282	55, 218
99283	55, 218
99284	55, 218
99285	253
99295	201
99296	201
99300	246, 260
99301	246, 260
99302	246, 260
99303	246, 260
99304	246, 260

Part No.	Page No.
99305	246, 260
99306	246, 260
99307	246, 260
99312	72, 135
99314	119, 205, 212
99315	119, 205, 212
99320	55, 218
99321	55, 218
99328	10, 48, 220
99330	214
99331	214
99332	214
99334	214
99338	256
99340	241
99341	241
99342	241
99347	163
99388	141
99390	93
99392	246, 260
99393	246, 260
99394	246, 260
99415	68
99420	177, 256
99430	136
99435	35, 61, 226
99466	41
99470	197
99471	197

Part No.	Page No.
99472	197
99473	197
99474	197
99475	197
99476	197
99477	197
99849	162
99850	162
99851	162
99852	162
99853	162
99862	162
99902	264
99903	264
99904	264
99906	264
99907	264
99912	264
99913	265
99914	265
99916	264
99917	264
99920	264
99921	264
99922	264
99940	234, 246, 265

Part No.	Page No.
99959	264
99960	265
99962	59, 234, 246, 265
99965	265
99968	265







234, 246,

234, 246,

Rodney Kaekel



A		Battery Continued		Brackets Continued	
Absorbent		Charging Post Bracket		Fuel Cell Mounting	144
Mats/Pads		Disconnect Switch	79	Fuel Cell Mounting (Spri	nt) 167
Powder		Hold Down (Optima)		Fuel Filter	
Access Panels		Quick Disconnects		Nitrogen Bottle	
Accessory Clamps	57	Terminals		Overflow Tank	
Air	244	Terminal Covers		Panhard Bar	
Hose		Bead Breakers		Power Steering Pump	
Jacks Pans		Bell Cranks, Throttle		Power Steering Tank	
Regulators		Bellhousing Dowel Pins . Belt(s)	101, 255	Quick Turn Fasteners	
Rivet Guns		Gilmer	60	Seat Mounts Shock	•
Tanks		Seat		Spoiler	
Air Cleaner(s)		Torque Tube		Steering Column	
Adapter		V-Groove		Steering Quickener	
Covers		Bench Yoke		Tie Down	
Nuts/Studs		Bert Transmission		Trailing Arm	
Air Filter Element(s)	8	Clevis Kit	252	Transmission Mount	
Cleaner	8	Clutch Discs	255	Universal	
Cleaning Station		Shifter		Braided Hose Cutter	225
Sealing Foam	7	Tool		Braided Steel Lines	125-129
Alternators	82	Birdcages		Brake	
Aluminum		Birdcage Bearings	.174, 214, 216	Bias Adjusters	
Angle and Flat Stock		Blanket(s)		Bias Gauges	
Sheet Metal		Moving/Utility		Bleeder Bottles	
Strapping		Torque Ball (Safety)		Boosters	
Tubing		Transmission (Safety)		Calipers	
Apron Axle(s)		Bleeder Bottles		Caliper Bolts	
Bearing		Bleeder Screws Blower Fan	33	Caliper Brackets	
C-Clips		Helmet	161	Caliper Spacers Combination Valve	
Front (Sprint)		Radiator		Combination Valve Brac	
Housing Ends		Body	254	Combination Valve Blee	
Housing Seal		Bolts	15	Ducts	
Nut Wrench (Sprint)		Braces		Duct Blower	
Plug	149	Radius Tool		Duct Flange	
Puller, T-Handle		Reinforcing Plates		Duct Hose	
Retainers		Roller	220	Fittings	32-34
Spline Tool		Strapping		Fluid	
Straps		Support Panels	12	Hose Kits	
Tubes		Bolt(s)		Kits, Disc	
Tube Seals Tube Tool		Backing Plate		Light Switches	
<u>_</u>	130	Bead Lock		Lines	
В	440	Body Button Head		Line Adapters/Fittings	
Backing Plate Bolts		Caliper		Line Deflectors Line Display Rack	
Back-Up Washers		Center Caps		Line Flaring Tool	
Balance Plate Ballast		Countersunk		Line Kits	
Brackets		Cylinder Head		Line Lock Kit	
Ball Joint(s)		Hex		Master Cylinder	
Adapter Bushing		Intake Manifold		Pedal Assemblies	
Holders		Jack	195-196	Pedal Clevises	
Sleeves		Load Bolt	196	Pedal Mounts	26-27
Spreader Tool	223	Rotor		Pressure Gauges	
Taper Reamer		Socket Head		Pressure Safety Switch	
Wrench	248	Sway Bar		Proportioning Valve	
Band Clamps		Boot, Shifter		Quick Disconnects	
Banjo Bolts/Fittings		Bottle Brackets	56	Remote Reservoirs	
Barrel Pump	144, 232	Bracket(s)	F-7	Residual Valves	
Battery	F0 70	Accessory		Rotors	
Boxes		Ballast Caliper		Rotor Bolt Kit Rotor Hats	
Cable Kits		Charging Posts		Rotor Spacers	
Cable Terminals Cable Thru-Stud		Control Arm		Shut-Off Valves	
Charging Posts		Fire Extinguisher		Breathers, Clamp-On	
Charging Losts	02	9		,	



Proather Covers	06	Class		Door Par Badding	150
Breather Covers Breather Tanks		Cleco Fasteners	222-222	Door Bar Padding Door Bar Swing-Out Kit	
Broom Holder		Pliers		Door Plate	
Bulbs, LED		Clevises		Double Adjusters	
Bulkhead Fittings		Clock		Double Flare Tool	
Bumper(s)		Clutch	203	Dowel Pins, Bellhousing	
Covers		Alignment Tools	330	Down Nozzle	233
Hook Up Kit		Discs, Bert		Breather Ring	166
Bump Rubbers/Stops		Lines		Plugs	
Bump Steer Studs		Coil Mounts		D-Rings	
Bump Steer Spacers		Coil-Over Shock		D-Ring Backing Plate	
Bump Stop Gap Tool		Bearing Kit	202	Drag Links	
Bungs		Eliminators		Drag Link Tether	
Weld-In	96. 135	Kits		Drain Pans	
02	•	Load Bolt Assembly		Drain Plug	
Burst Panel Components		Spring Adapter (5")		Drill Bit(s)	
Buss Bars		Spring Adjuster, Hydrau		Double Ended	221
С		Coil Spring		Flange Rivet	
Cable Tie(s)		Cups	196, 219	Spring Steel	
Mounting Bases	107	Shims		Step	
Nylon		Spacers		Wheel Stud	
Stainless Steel		Compression Tester	230	Drill Fixture	224
Tool		Control Arm(s)		Drill Holders	237
Caliper(s)		Brackets/Mounts		Drink Bottle Kit	162
Bolts	24	Bushings	193-194	Drive Flange Gaskets	151
Brake		Limit Clamps		Driver Air System	
Brackets		Shims		Driver Suits	
Dial/Digital		Crankshaft		Driveshafts	156
Fittings		Balancing Plate	89, 254	Driveshaft Loops	156
Spacers		Hub	94	Drum Pump	232
Camshaft		Keys		Dry Break Valves	144
Bearing Tool	94. 228	Pulley Mandrel Kit	69	Duct Blower	
		Socket	220	Durometer	2/12
Button Spacers	94				
Button Spacers Locking Plate		Crankcase Evacuation Sys	tem 95	Dust Caps	
Locking Plate Seal Plates	94	Crankcase Evacuation Systems Crayons, Tire	tem95 242		
Locking Plate Seal Plates	94 94	Crankcase Evacuation Systems Crayons, Tire	tem95 242 154	Dust Caps E	146
Locking Plate	94 94 n 132, 230	Crankcase Evacuation Systems Crayons, Tire	tem95 242 154	Dust Caps	146
Locking Plate Seal Plates Caps, Plastic and Aluminum	94 94 n 132, 230 17	Crankcase Evacuation Systems Crayons, Tire	tem95 242 154 32, 124	E Earplugs Electrical Electric Fans	146160, 23467
Locking Plate	94 94 n 132, 230 17	Crankcase Evacuation Systems Crayons, Tire	tem95 242 154 32, 124	Dust Caps E Earplugs Electrical	146160, 23467
Locking Plate	94 94 n 132, 230 17 240	Crankcase Evacuation Systems Crayons, Tire Cross Pins Crush Washers Cylinder Head Bolts Dowel Pins	tem95 242 154 32, 124	E Earplugs Electrical Electric Fans	
Locking Plate	94 94 n 132, 230 17 240 142	Crankcase Evacuation Systems Crayons, Tire	tem95 242 32, 154 32, 124 97	E Earplugs Electrical Electric Fans Electric Fuel Pump Connectors Outlet(s)	
Locking Plate	94 94 n132, 230 17 240 142 138	Crankcase Evacuation Systems Crayons, Tire	tem95 154 32, 124 97 97	E Earplugs E Electrical Electric Fans Electric Fuel Pump Connectors Outlet(s) Pliers	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats		Crankcase Evacuation Systems Crayons, Tire	tem95 242 154 32, 124 97 97	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts		Crankcase Evacuation Systems Crayons, Tire	tem95 242 32, 124 97 97 97	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits		Crankcase Evacuation Systems, Tire	tem95 242 154 32, 124 97 97 97	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits		Crankcase Evacuation Systems Crayons, Tire	tem95 242 154 32, 124 97 97 97 21 220 58 225	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Return Springs		Crankcase Evacuation Systems, Tire	tem9524215432, 1249797212205822518	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Return Springs Shear Plates		Crankcase Evacuation Systemson, Tire	tem95242154979797212205822518	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Return Springs Shear Plates Spacers		Crankcase Evacuation Systems, Tire	tem9524215497979721220582251859 n11	E Earplugs	146160, 23413674-75822337723673224
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Return Springs Shear Plates Spacers Stand		Crankcase Evacuation Systemson, Tire	tem9524215497979721220582251859 n11	E Earplugs	146160, 23413674-75822337723622410399
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Return Springs Shear Plates Spacers Stand Caster Plate		Crankcase Evacuation Systemson, Tire	tem9524215497979721220582251859 n11121	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Linkage Kits Return Springs Shear Plates Spacers Stand Caster Plate Caster Wheels		Crankcase Evacuation Systems, Tire	tem95242154979797212205825582511121220220	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Linkage Kits Return Springs Shear Plates Spacers Stand Caster Plate Caster Wheels Catalog Rack		Crankcase Evacuation Systemson, Tire	tem9524215432, 12497972122058251859 n112202122025321	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Linkage Kits Return Springs Shear Plates Spacers Stand Caster Plate Caster Wheels Catalog Rack C-Clips		Crankcase Evacuation Systems, Tire	tem9524215432, 124979721220582251859 n1112122025321	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Linkage Kits Return Springs Shear Plates Spacers Stand Caster Plate Caster Wheels Catalog Rack C-Clips Centerlinks		Crankcase Evacuation Systemson, Tire	tem9524215432, 124979721220582251859 n112202532125 tery80	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Linkage Kits Return Springs Shear Plates Spacers Stand Caster Plate Caster Wheels Catalog Rack C-Clips Centerlinks Charging Post(s)		Crankcase Evacuation Systerayons, Tire	tem9524215432, 12497979721220582251859 n11220252525252525	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Linkage Kits Return Springs Shear Plates Spacers Stand Caster Plate Caster Wheels Catalog Rack C-Clips Centerlinks Charging Post(s) Mounting Bracket		Crankcase Evacuation Systerayons, Tire	tem9524215432, 12497979721220582251859 n11220252525252529	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Linkage Kits Return Springs Shear Plates Spacers Stand Caster Plate Caster Wheels Catalog Rack C-Clips Centerlinks Charging Post(s) Mounting Bracket		Crankcase Evacuation Systerayons, Tire	tem9524215432, 124979721220582251859 n11220252525252526	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Linkage Kits Return Springs Shear Plates Spacers Stand Caster Plate Caster Wheels Catalog Rack C-Clips Centerlinks Charging Post(s) Mounting Bracket Chassis Dollies Chassis Set-Up Blocks		Crankcase Evacuation Systerayons, Tire	tem9524215432, 124979721220582251859 n11220252525252526	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Linkage Kits Return Springs Shear Plates Spacers Stand Caster Plate Caster Wheels Catalog Rack C-Clips Centerlinks Charging Post(s) Mounting Bracket Chassis Dollies Chassis Tie Down Brackets		Crankcase Evacuation Systerayons, Tire	tem9524215432, 124979721220582251859 n111212202525259985-8699	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Linkage Kits Return Springs Shear Plates Spacers Stand Caster Plate Caster Wheels Catalog Rack C-Clips Centerlinks Charging Post(s) Mounting Bracket Chassis Dollies Chassis Tie Down Brackets Chrome Moly Tubing		Crankcase Evacuation Systerayons, Tire	tem9524215432, 124979797	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Linkage Kits Return Springs Shear Plates Spacers Stand Caster Plate Caster Wheels Catalog Rack C-Clips Centerlinks Charging Post(s) Mounting Bracket Chassis Dollies Chassis Tie Down Brackets Chrome Moly Tubing Circuit Breaker		Crankcase Evacuation Systerayons, Tire	tem9524215432, 124979797	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Linkage Kits Return Springs Shear Plates Spacers Stand Caster Plate Caster Wheels Catalog Rack C-Clips Centerlinks Charging Post(s) Mounting Bracket Chassis Dollies Chassis Set-Up Blocks Chassis Tie Down Brackets Chrome Moly Tubing Circuit Breaker Clamp-On Rings		Crankcase Evacuation Systerayons, Tire	tem95242154979797	E Earplugs	
Locking Plate Seal Plates Caps, Plastic and Aluminum Car Covers Car Lift Carburetor Bushing Kits Fittings Gaskets Hats Hold Down Nuts Line/Log Kits Linkage Kits Return Springs Shear Plates Spacers Stand Caster Plate Caster Wheels Catalog Rack C-Clips Centerlinks Charging Post(s) Mounting Bracket Chassis Dollies Chassis Tie Down Brackets Chrome Moly Tubing Circuit Breaker		Crankcase Evacuation Systerayons, Tire	tem9524215432, 124979797	E Earplugs	



Exhaust Continued		Fuel Continued		Grease Continued	
Manifolds	98	Cell Hose		Wheel Bearing	
Shields	98	Cell Mounting Brackets	144, 167	Grommets	76
Wrap	98	Cell Top Plate Hardware(S	print) 175	Ground Clearance Indicator	197
F		Check Valve		Ground Straps	
-	221	Drum Pump		Ground Stud	
Fabrication Pencil	221	Dry Break Valves		Guide Plates	97
Fan(s)	22.4	Filters		Gussets	50
Blower		Filter Brackets			
Electric				н	
Mechanical		Fragrances	01	Half Clamps	56
Reinforcement Plate		Injection Fittings		Hat(s)	
Shrouds		Line		Baseball	
Spacers	67	Line Kits, Carb		Beanie	264
Feeler Gauges	229	Logs		Carb	139
Fender Braces		Lubricant		Rotor	
Fender Washers		Pressure Gauges		Header Tab Kit	
Files, Thread		Pressure Regulator	136	Header Gaskets	
Fill Line Kit		Pressure Reg. Brackets	141	Header Wrap	98
Fill Tanks		Primer Bottle		Headlight Decal Kits	35
Filler Cap Kit		Pumps		Heat Shrink	76
Filter	90	Pump Block-off Plates		Heat Sleeve	
Air	0	Pump Gaskets			
		Pump Mounting Plate		Heat Wrap	90
Breather		Shut-Off Valve		Heaters	
Fuel		Funnels		Immersion	91
Oil		Fuse Terminals		Pads	
Fin Comb				Heel Riser	
Fire Extinguisher Mount E		Fuse Block	/9	HEI Distributors	
Firewall Cable Bushing	79	G		HEI Mechanical Advance Kit.	
Fitting(s)		Gas Pedals	143	HEI Wire Connectors	86
Brake	32-34	Gasket(s)		Heims (See Rod Ends)	
Carburetor	138	Carburetor	99	Helmet	
Fuel Injection		Distributor		Blower System	161
Inverted Flare		Engine		Dryer	161
NPT		Ford 9"		Hooks	
Oil Inlet		Fuel Pump		Vent Hose	
Power Steering		Header		Vent	
Radiator		Oil Pan		Hinges, Aluminum	
Reducer, AN		Quick Change Cover		Holder(s)	
				Aerosol Can	22-
Flange Bearing		Thermostat Housing		Dell Isiat	10
Flaring Tool		Valve Cover	95	Ball Joint	
Flexplates		Gauge(s)	20	Broom	
Floor Jack		Brake Pressure		Drill	
Floor Plates	41	Feeler		Nitrogen Bottle	241
Flywheel Locking Tool	254	Lines	129	Paper Towel	236
Fogging Oil	61	Mechanical	83	Radiator	63, 234
Ford 9"		Panels	83	Rod and Piston	228
Axles	148	Sending Units	83	Tire Gauge	242
Axle Housing Seal	149	Sprint Fuel Pressure	231	Hole Saws	
Axle Retainers		Stagger		Honeycomb	
Backing Plate T-Bolts		Tire		Hood Hinge Kits	
Gasket		Gear(s)		Hood Pin	
Housings		Cover (Quick Change)	151	Kits	16
		Distributor		Mounts/Adapters	
Housing Ends					
Housing Studs		Marking Compound		Supports	
Pinion Centering Jig		Ring and Pinion		Hood Prop	
Pinion Nuts		Totes		Hood Scoops	18
Pinion Support		Tote Trays		Hose(s)	
Pinion Yokes		Gear Drive		Air	
Truss Support	147	Gilmer Belts	69	Assembly Tools	
Frame Repair Plate		Gloves	234	Brake Hose Kits	
Freeze Plug Driver		Grease		Brake Duct	
Fuel		Gun/Tips	225	Clamps	
Cell Cap and Bung	144	High-Pressure		Cutter	
Cell Guard	44	Remover/Cleaner		Helmet Vent	



Hose(s) Continued	Limiter Chain Clamps215	O2 Sansar Plug and Pung 98
Fuel 137, 144	Line Clamps 121	O2 Sensor Plug and Bung98
Radiator71	Line Lock Kit29	Oil Bottle Tray
Reducer71	Linkage Kits, Carb	Bottle Tray237 Coolers91-92
Restrictor70	Load Bolts	Cooler Scoop91
Vacuum 137	Jam Nuts	•
Housing Stud Kit, Ford 9"154	Sleeves	Filter
Hub	Loading Couplers 181	Filter Adapters
Covers	Log Book226, 241	Filter Cutter228
Seals146	Lowering Blocks 219	Galley Plugs91
I	Ludwig Clamps	Heaters 91
Idle Speed Adjuster 141	Lug Nuts258	Inlet Fittings90
Idler Arms183	Lug Wrenches241	Pan and Pick-Up89 Pan Gaskets99
Ignition Box Mount87	M	Primer Tank91
Ignition Coil87	Magnets230	Restrictors91
Ignition Coil Mounts87	Main Cap Removal Tool228	Temperature Tee90
Ignition Panels84	Mandrel Spacers69	Oil Eater58
Impact Crimper79, 233	Markers, Paint242	Overflow
Indicator Lights 83-84	Masking Tape236	Check Valves (Fuel)144
In-line Duct Blower26	Master Cylinder(s)27	Fitting72
In-Line Thermostat Housing 71	Reservoirs27	Nozzle72
Inner Mud Shield257	Mat, Absorbent237	Tanks
Intake Manifold Bolt Kit97	Mat, Pit239-240	Tank Brackets72
Inverted Flare Fittings 125	Mat, Track239	
Inverted Flare Nuts130	Merchandising Displays265	Р
J	Metal Snips220	Padding
Jacks	Micro Switch143	Door Bar158
Air240	Mid-Plates 101	Roll Bar158
Pit239	Mini-Spools154	Paint Markers242
Jack Bolts 52, 195	Mirrors, Rear View162	Panhard Bar(s)205
Jam Nuts52, 195	Mirror, Telescoping230	Adjusters205-207
Sleeves52, 195	Mono Ball Bearings212	Brackets/Mounts205-207
Jack Post Kit, Right Hand42	Moose Blocks248	Pedal Extensions26
Jack Post Quick Change 151	Morse Cable Clamps253	Pedal Plate, Floor26
Jack Stands239	Motor Mount(s) 101-103	Peg Hooks266
Jacobs Ladders 175	Spacers 102-103	Petcock72, 124
Pin Kits 175	Motor Plates101	Pilot Bearings/Bushings254
Jam Nuts 117	Moving Blanket239	Driver230
J-Bars205	MSD Box Mount87	Pinion
Junction Block77	Mud Plugs257	Centering Jig147
K	Mud Scraper234	Nuts 155
Knee Guard 158	Mud-X58	Seals155
Knee Guard Mount 171	N	Support 155
Koul Tool225	Nitrogen Bottle Holder241	Yokes 155
	Nitrous Bottle Blankets 139	Yoke Wrench 155
L La musanda	Nitrous Combination Wrench 232	Pit
Lanyards	Nitrous Pressure Control Kits 139	Cart240
Layout Pencil	Nitrous Switches (WOT)143	Jacks239-240
Layout Fluid229	Non-Skid Tape235	Mats239-240
Leaf Spring	Nose Pieces 38-40	Sockets
Lowering Blocks	Nose Supports 39-40	
Pads	Nose Wing Posts168	Nut Kit183 Plastic
Slider Box	Nose Wing Wall Mount169	Rolled/Sheets12
U-Bolts	Notchers, Tubing220	
	Novus Cleaner and Polish59	Caps and Plugs 132, 230
LED Bulbs83	Novus cleaner and ronsir	
Loval Raca 220	Nuts	Plastigage
Level Base		Plexus Cleaner 59
Level, Digital220	Nuts Carburetor 7, 140 Hex 117	Plexus Cleaner 59 Pliers
Level, Digital220 Lift Bar Retainer Clamp214	Nuts Carburetor 7, 140 Hex 117 Insert48, 112, 115	Plexus Cleaner
Level, Digital	Nuts Carburetor	Plexus Cleaner
Level, Digital 220 Lift Bar Retainer Clamp 214 Lift, Car 240 Lift Handles 227	Nuts Carburetor 7, 140 Hex 117 Insert48, 112, 115	Plexus Cleaner 59 Pliers 105 Electrical 233 Safety Wire 224
Level, Digital 220 Lift Bar Retainer Clamp 214 Lift, Car 240 Lift Handles 227 Lift Plates, Engine 228	Nuts Carburetor 7, 140 Hex 117 Insert 48, 112, 115 Jam 117 Lug 258 Pinion 155	Plexus Cleaner 59 Pliers 105 Electrical 233 Safety Wire 224 Polycarbonate Sheet(s) 12
Level, Digital 220 Lift Bar Retainer Clamp 214 Lift, Car 240 Lift Handles 227 Lift Plates, Engine 228 Lifter Valley Covers 92	Nuts Carburetor 7, 140 Hex 117 Insert 48, 112, 115 Jam 117 Lug 258	Plexus Cleaner 59 Pliers 105 Electrical 233 Safety Wire 224 Polycarbonate Sheet(s) 12 Cleaner 59
Level, Digital 220 Lift Bar Retainer Clamp 214 Lift, Car 240 Lift Handles 227 Lift Plates, Engine 228	Nuts Carburetor 7, 140 Hex 117 Insert 48, 112, 115 Jam 117 Lug 258 Pinion 155	Plexus Cleaner 59 Pliers 105 Electrical 233 Safety Wire 224 Polycarbonate Sheet(s) 12



Power Steering		Radius Rods	•	Scoop(s) Continued	
Cooler	180	Radius Rod Studs		Tray	9
Fittings		Ratchet Binder/Straps	238	Tray Mounts	
Hose Kits/Fittings		Reamer/Taper	189	Screen, Stainless Wire	
Pump		Rear End		Screws, Wheel Rim	
Pump Brackets		Bearing and Shim Kits.		Scuff Plates	17
Tanks		Fill Tanks		Seal(s)	
Tank Brackets		Gear Sets		Axle Tube	
Pressure Switches	83	Housings	147-148	Hub	146
Primer Bottle		Station Brackets		Pinion	
Proportioning Valve	28	Truss Support		Tailshaft Housing	
Pull Bar(s)	208-209	Rear Main Seal Adapters		Timing Cover	93-94
Brackets	207	Rear Tank Guard	44	Seat	
Covers	208	Reducer Bushings	118	Mount Kits/Brackets	44, 160
Pulley(s)		Reducer Fittings	120, 134	Track Assembly	160
Aluminum	68-69	Reflective Tape	235	Seat Belt(s)	160
Shims	68	Relays		Anchor Plates/Mounts	· 160, 172
Punch and Flare Tools	220	Remote Fill Tanks		Installation Kits	160
Pushrod Guide Plates	97	Remote Reservoir	27	Sending Units	72, 83
Q		Remote Starter	229	Set Screws	115
Quick Change		Residual Check Valves	28	Set-Up	
Axles	149	Return Springs		Blocks	248
Axle Tubes		Ride Height Blocks	248	Book	226, 247
Axle Tube Support Bracke		Ride Height Set-Up Stick	249	Plates	248
Axle Tube Tool		Ring and Pinion		Sheets	226
Cover		Set	153	Stick	249
Cover Gasket		Installation Kits	152	Tool	248
Cover Nuts		Ring Gear Spacer	153	Shackles, Leaf Spring	219
Drain Pan		Ring Terminals		Shaft Collars	182
Gear Tote		Rivets	104-106	Shaker Screen	65
Oil Plug Socket		Rivet Guns		Sharpie Markers	242
Side Bell O-Ring		Rocker Arm Studs	97	Shear Plates	
Quick Disconnects, Battery		Rock Screen	164, 168	Sheet Metal	10-11
Quick Disconnect Fittings		Rod and Piston Holder		Shifter(s)	
Quick Release Pin(s)		Rod Ends	119	Arm	
Lock Collar		Rod End Kit, Oversize	182	Boot	253
Throttle End		Rod End Bushings/Spacer	s 118	Cable	253
Quick Turn	172	Rod End Centering Tools		Shim(s)	
Fasteners	108-109	Rod Guide Tool		Bump steer	185
Insert Plates		Roll Bar/Cage Kit(s)		Control Arm	193
Mounting Brackets		Front Arch Support		Pulley	
Reinforcing Plates		Front Support Kit		Shock	199-200
Spring Adjuster		Installation Kit		Shipping Tape	
Spring Adjuster		Rear Support Kit		Shock	
Transfer Punches		Roll Bar Padding		Boot	202
Wrench		Roof(s)		Brackets	
		Cap		Bump Rubbers	
R		Support		Bump Spring Cups	
Racers Tape		Run Out Checker		Canister Mounts	
Rack and Pinion Spacers		S		Covers	
Radiator(s)		Safety Glasses	22/	Extensions	
Air Scoop		Safety Wire		Eye Socket	
Caps				Inflation Tool	
Fan Shroud		Drill Fixture Twister Pliers		Protector	
Fin Comb				Quick Pins	
Fittings		Sander, Tire		Racks	
Honeycomb		Sanding Discs		Shims	
Hoses		Scale Buddy		Spacers	
Hose Clamps		Schrader Valves	203	Travel Indicator	
Mounting Brackets		Scoop(s)	0	Workstation	
Overflow Tanks		Dragster		Shop Towels	
Rock Screen		Hood		Shrinker/Stretcher	
Shaker Screen		Mounts		Side Bell O-Ring	
Wall Mount		Oil Cooler		Sipers, Tire	
Radio Boxes	162	Radiator	00, 104	Sixth Coil Assembly	



Slider Box(es)		Starter(s)	81	Taper Reamers	
Adjuster		Cover		Tapered Spacers	
T-Nuts	217	Solenoid		Tear-Off Machine	160
Smart Tool	220	Switches/Buttons	84	Tear-Off Posts	160
Snouts		Steel		Telescoping	
Soap/Cleaners	58-59	Angle and Flat Stock	14, 45	Magnet	
Sockets		End Caps		Mirror	
Crank		Plate		Temperature Gauge Adapte	
Lug/Pit		Tubing	46-47	Temperature Switches	
Quick Change Plug		Steering		Temperature Tees	
Shock Eye		Arms, Sprint Car		Terminal Connectors	
Spindle Nut		Box Mounts (Sprint)		Test Leads	
146		Centerlinks		Test Light	
Solder Slugs		Column Brackets		Tether, Drag Link	
Solenoid, Starter		Flange Bearing		Thermostat Housing(s)	
Jumper Wire Sonic Cleaners		Loading Coupler		Gasket	
Spacer(s)	237	Pitman Arms		In-line	
Bolt	110	Quickener Bracket		Restrictors	
Caliper		Rack Boot Cover		Spacer	
Carb		Rod End Mayoring Tab		Transmission Coolers	
Crank Mandrel		Rod End Mounting Tab Shaft		Threaded Inserts	
Engine/Motor Mount				Threaded Insert Tool	
Fan		Shaft, Collapsible		Third Link(s) Brackets	
Rack and Pinion		Shaft Collar Tie Rod Ends		Thread Files	
Rod End		U-Joints		Thread Sealant Tape	
Shock 90/10 Kit		Wheel Disconnects		Threaded Tube Ends	
Tapered		Wheel Extensions		Throttle	
Thermostat Housings		Wheel Pads		Bell Crank	142
Tie Rod		Step Drill Set		Bushings	
Upper Link Kit		Storage Cases		Cable	
Wheel		Storage Tote		Linkage Kits	
Spark Plug		Stretch Wrap		Pedals	
Boot Protectors	88	Suit, Drivers		Quick Release Ends	
Gap Tool	229	Surface Guard Tape		Return Springs	
Indexing Shims	229	Suspension Limiter		Return Spring Bracket	
Indexing Tools		Suspension Limiter Chain		Tie Down Straps	
Wire looms	88	Suspension Set-up Tool		Tie Down Brackets	
Wire Retainers		Suspension Tubes	210-211	Tie Rods	184
Wire Sets		Sway Bar		Tie Rod Spacer	185
Spindle(s)		Adjuster Kits		Tie Rod Stud	185
Checkers		Arms	197	Tie Rod Tubes	184
Ducts		Bolts	197	Tie Wraps	
Nut Kits		Sweatshirts		Nylon	
Nut Socket		Swedge Tubes		Stainless Steel	
Reamers		Swing Arms		Timing Chain Cover(s)	
Savers		Switch Panels	84	Gaskets	
Spoiler(s)		Т		Seals	
Brackets		Tabs, Chassis	49	Timing Pointers	
Hinges		Tachometer Mount (Tel Tac	:)83	Tin Snips	220
Supports		Taillight Decal Kit	39	Tire	2.45
Spools		Tailshaft Seal and Bushing	255	Bead Breakers	
Spoons, Tire		Tank(s)		Cleaner	
Spring		Air	241	Covers	
Spring	106	Breather		Crayons	
Cups		Oil Primer		Durometer	
Ramp Pre-loader		Overflow, Radiator		Gauge	
Shims/Spacers		Power Steering		Gauge Holder	
Spring Steel		Remote Fill		Grinding Discs	
Drill		Tank Heaters		Groovers, Heated	
Punches		<u>Tap(s)</u>		Log Books	
Shrink Sleeve		Tape		Log Decals Markers	
Stack Stands		Display Rack		Needler/Perforator Tool	
Stagger Gauge		Gun		Prep Stands	
		Tape Measures	242, 248	1 1 CP 3 Carras	275-274



· · · · ·	
Tire Continued	
Relief Pre-Setter Gauge263	
Sander245	5
Sipers244	
Soap58	8
Softener 60	0
Spoons24!	
Tape Measure242	
Temp Gauge262	
Wrap260	
Titanium	U
	_
Bolts 110	
Fastener Kits 174-176	
Toe Plates248	
Toggle Extensions84	4
Toggle Switches84	4
Tool Tray23	
Top Wing Trees169	9
Torque Ball Blanket163	3
Torque Converters254	
Torque Tube Belt	
Torsion Arms 177	
Torsion Arm Stop 173	
Torsion Arm Stop Kit 173	
Torsion Bar Bushings 173	3
Totes	
Gear25	1
Storage240	
Tow Hooks40	
Towel(s)59, 230	
Holders230	
Track Bar Locator Brackets54	
Track Mats239-240	
Trailing Arm(s)218	
Brackets216-218	
Bushings218	8
Transfer Punches223	3
Transmission	
Blanket254	4
Breather Kit25	
Dipsticks25	
Mount25	
Stand22	
Yokes25!	5
Trays	_
Can23	
Gear Tote25	
Oil Bottle23	
Tube Clamps52	2
Tube Nuts 130	0
Tubina	
Aluminum 45, 132	2
Cutters22	
End Caps50	
Notcher220	
Steel	
Threaded Ends4	
Threaded Ends4	
U U-Bolts	7
U-Bolts Leaf Spring21	7 9
U U-Bolts	7 9 5

Ultrasonic Cleaners237

Umbrella26	5
Universal Brackets5	
Upper Link(s) 208-20	9
Brackets20	7
Spacer Kits20	7
Jpper Lube6	1
V	
Vacuum Line13	2
Valve	
Core26	3
Core Tool24	
Lash Wrenches22	9
Seals9	
Spring Compressor22	9
Stem Puller24	
Stems26	
Stem Caps26	
Valve Cover(s)9	
Breathers9	
Gaskets9 Hold Down Fasteners9	2
9	o a
	כ
W	_
Warning Lights8	ے 1
Wash Plug Sets23 Washers	ı
Back-Up10	6
Crush	
Fender 11	
Flat11	
Locking11	
Water Necks7	
Water Neck Spacer7	
Water Pressure Warning Kit7	
Water Pump(s)68, 7	0
Block Adapters7	
Cam Stop Kit6	
Gaskets9	
Pulley Kits 68-6	
Spacer Kits6	
Weather Pack Connector(s)7	
Pliers	-
Terminal Tool	4
Weight Jack Bolts19	_
Jam Nuts19	
Plate19	
Sleeves	
Weld Bungs13	
Weld-On Nuts4	
Weld-On Snouts15	
Wheel	
Adapter25	8
Bearings 14	
Bearing Grease14	5
Bearing Seal14	6
Bearing Spacer14	
Covers/Fasteners256-25	
Dollies23	
Rim Screws25	
Spacers258-25	
Stud Drill Bit	გ ი
Stud Drill Bit25 Wrench (Sprint)24	٥ 1
vviencii (эргіпі)24	1

Wheelie Bar Wheels	219
Wheelie Bar Wrenches	232
Wide Open Throttle Switch	143
Nindow Net(s)	159
Installation Kits	
Windshield	
Cleaner/Polish	59
Material	12
Support	21
Wing	
Adjuster, Manual	169
Caps	169
Cylinders	169
Cylinder Line Kit	169
Posts	168
Tree	169
Wall Mount Brackets	
Nipes, Hand Cleaning	
Nire	250
Connectors	75
Cutters	233
Heat Shrink	76
Primary	7:
Loom	73
Safety	22/
Terminals74-75	70
Wire Tie(s)	, , , -
Mounting Bases	23:
Nylon	
Stainless Steel	
Tool	
Wrecker Hook-up Kit	
Wrench(es)	(
Aluminum Adjustable	227
AN Fitting230,	232
Ball Joint188,	
Lug	240
Nitrous Combination	24
Pinion Yoke	
Quick Turn	
Valve Lash	220
Wheelie Bar	
Yoke	
Y	250
-	455
Yokes	155
Seals	155
Wrench	25(
Z	
Zip Tie(s)	
Mounting Bases	233
Nylon	233
Stainless Steel	
Tool	233



Returns

To make sure that the item(s) get quickly processed, please follow these simple steps.

- Call and request an RGA (Returned Goods Authorization) number for the merchandise you wish to return. All merchandise to be returned must be accompanied by an RGA number and be in its original packaging. The product must be unused, unaltered and unchanged from its original state (unless it is a potential warranty issue). Any merchandise returned that does not meet this criteria may be subjected to an additional handling fee or refusal.
- 2. Pack the parts carefully to avoid any damage during shipping. Always use a sturdy shipping carton to ship the parts back. Print your RGA number on the outside of the shipping carton. Please do not write on, use tape, or affix shipping labels to the product package itself, because we must return it to stock and we can't sell a box that is defaced.
- 3. We need the invoice number or, better yet, a copy of the original invoice showing when the part was purchased. Please include this information with the merchandise you're returning. We're sorry, but we can not accept returns on custom-built items.

Warranty

Allstar Performance® warrants each new product to be free from defects in both workmanship and materials for a period of ninety (90) days from the date of purchase. Product in question should either be returned to the dealer from which it was purchased, or shipped directly to Allstar Performance® along with an RGA (see above), proof of purchase and a complete description of the problem. The product must be returned freight pre-paid; COD's will not be accepted. No parts will be reviewed for inspection if modifications have been made. If, after factory inspection, the part is deemed to be defective, it will be replaced or a refund check will be issued.

Disclaimer of Warranty

ALLSTAR PERFORMANCE makes no warranties...

Allstar Performance products are designed for Off-Road use and makes no written, oral, expressed, or implied statement of warranty or guarantee on any product sold. Allstar Performance will not assume liability for personal or property damage resulting from the use or misuse of any product we manufacture or sell. Purchase and/or use of these products implies recognition and acceptance of this entire warranty and disclaimer by customer.

Printing Disclaimer...

Allstar Performance reserves the right to update, change or modify any product or policy deemed necessary without notice. Every effort has been made to avoid printing errors, in this catalog and previous versions. We disclaim any responsibility for application or specification errors.

Items That Require Additional Shipping Charges

Some items in this catalog are too large for ground shipment and therefore must be shipped via truck freight (pre-paid), some of these items may also include a shipping pallet surcharge. Throughout this catalog, the parts that require truck freight or a pallet for shipment will be marked with an appropriate icon.

Note: Some packages and/or shipments may be subject to the application of dimensional weight when calculating freight charges. Dimensional weight, when applied, may be significantly greater than the actual weight of a package and/or shipment and generally applies to products which are not very heavy, but large in volume (I xWxH).











INCH/METRIC CONVERSION TABLE

In	ch		In	ch		In	ch	
Fraction	Decimal	ММ	Fraction	Decimal	MM	Fraction	Decimal	MM
	0.00004	0.001	17/64	0.2656	6.746		0.6693	17.0
	0.00039	0.01		0.2756	7.0	43/64	0.6719	17.066
	0.0010	0.025	9/32	0.2812	7.1437	11/16	0.6875	17.4625
	0.0020	0.051	19/64	0.2969	7.5406	45/64	0.7031	17.859
	0.0030	0.0762	5/16	0.3125	7.9375		0.7086	18.0
	0.00394	0.1		0.3150	8.0	23/32	0.7187	18.256
	0.0050	0.1270	21/64	0.3281	8.334	47/64	0.7334	18.653
	0.00984	0.25	11/32	0.3437	8.731		0.7480	19.0
	0.0100	0.254		0.3543	9.0	3/4	0.7500	19.05
1/64	0.0156	0.396	23/64	0.3594	9.1281	49/64	0.7656	19.446
1/32	0.0312	0.793	3/8	0.3750	9.525	25/32	0.7815	19.843
	0.03937	1.0	25/64	0.3906	9.9219		0.7874	20.0
3/64	0.0469	1.191		0.3937	10.0	51/64	0.7969	20.240
	0.0591	1.5	13/32	0.4062	10.318	13/16	0.8125	20.6375
1/16	0.0625	1.5875	27/64	0.4219	10.716		0.8268	21.0
5/64	0.0781	1.984		0.4331	11.0	53/64	0.8281	21.034
	0.0787	2.0	7/16	0.4375	11.1125	27/32	0.8437	21.431
3/32	0.0937	2.381	29/64	0.4531	11.509	55/64	0.8594	21.828
	0.0984	2.5	15/32	0.4687	11.906		0.8661	22.0
	0.1000	2.54		0.4724	12.0	7/8	0.8750	22.225
7/64	0.1094	2.778	31/64	0.4844	12.303	57/64	0.8906	22.621
	0.1181	3.0	1/2	0.5000	12.7		0.9055	23.0
1/8	0.1250	3.175		0.5118	13.0	29/32	0.9062	23.018
	0.1387	3.5	33/64	0.5156	13.096	59/64	0.9219	23.416
9/64	0.1406	3.571	17/32	0.5312	13.493	15/16	0.9375	23.8125
5/32	0.1562	3.968	35/64	0.5469	13.891		0.9449	24.0
	0.1575	4.0		0.5512	14.0	61/64	0.9531	24.209
11/64	0.1719	4.366	9/16	0.5625	14.2875	31/32	0.9687	24.606
	0.1772	4.5	37/64	0.5781	14.684		0.9843	25.0
3/16	0.1875	4.7625		0.5906	15.0	63/64	0.9844	25.003
	0.1969	5.0	19/32	0.5937	15.081	1	1.0000	25.4
13/64	0.2031	5.159	39/64	0.6094	15.478		1.0630	27.0
7/32	0.2187	5.556	5/8	0.6250	15.875		1.1024	28.0
15/64	0.2334	5.953		0.6299	16.0		1.1811	30.0
	0.2362	6.0	41/64	0.6406	16.271	1 1/4	1.2500	31.75
1/4	0.2500	6.35	21/32	0.6562	16.668		1.2992	33.0

Inches x 25.4 = Millimeters

Millimeters x .03937 = Inches

Sq. Inches x 6.4515 = Sq. Centimeters

Sq. Centimeters x . 155 = Sq. Inches

Pounds x.4536 = Kilograms

Kilograms x 2.2046 = Pounds

Lbs. per in. 2 x .0703 = kg per cm 2

kg per cm 2 x 14.2231 = Lbs. per In. 2

Newtons x .2248 = Pounds(Force)

Temperature Conversion (Approximate)

Degrees C = (Degrees F - 32)(.5556)

Degrees F = (Degrees C)(1.8)+32



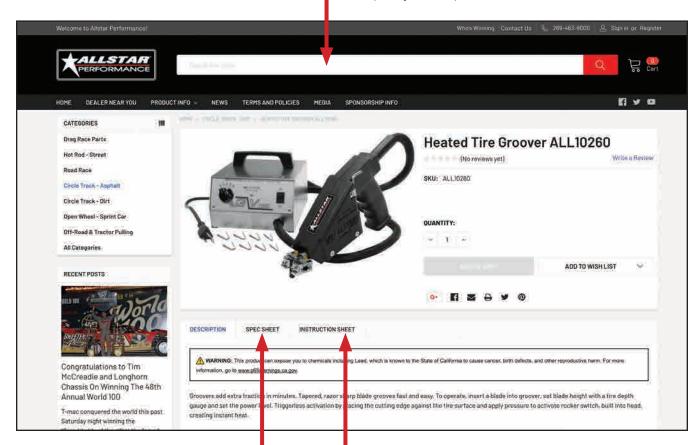
Jeff Leka



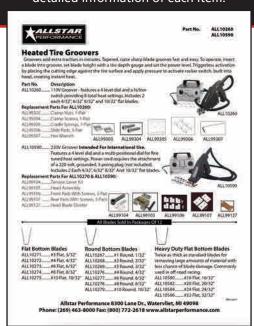
www.allstarperformance.com

PART NUMBER AND KEYWORD LOOKUP

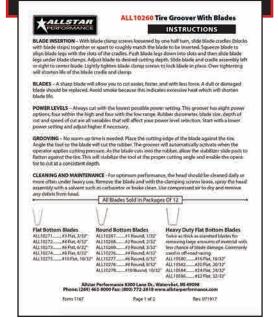
Type a part number or keyword into the search field to quickly locate parts.



PRODUCT INFORMATION SHEETS
Opens a printable PDF with detailed information of each item.



INSTRUCTION SHEETSOpens a printable PDF with detailed installation and operation instructions.







8300 Lane Drive Watervliet, MI 49098 269-463-8000 Fax: 800-772-2618 www.allstarperformance.com

